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FINANCIAL TIMES



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Nurturing premium brands
Peter Martin, Page 14

Today's surveys
Pension Fund Investment Information Technology
Separate Sections

World Business Newspaper THURSDAY MAY 2 1996

Asian nations criticise policy of development bank

China and Malaysia criticised the Asian Development Bank yesterday for putting tough conditions on its loans. Malaysian deputy premier Anwar Ibrahim accused the ADB of "bureaucratic rigidity" towards borrower countries, while Jin Jieyan, deputy governor of the People's Bank of China, said it should "give adequate attention to the importance of economic growth in its pursuit of social development objectives." Page 18; US seeks to bar China, India from fund, Page 6

Offer to Berlusconi The rightwing alliance headed by former Italian prime minister Silvio Berlusconi is to discuss an offer from the centre-left Olive Tree coalition, which won last month's general election, to take important posts in the new Italian parliament. Page 16; Observer, Page 15

Poor US sales hit Courtaulds Courtaulds Textiles shares plunged more than 10 per cent in London after Britain's second biggest clothing and fabric maker warned of a sharp drop in US sales. Page 23 and Lex

Stena Line chief Bo Lerenius said the Swedish ferry operator was committed to remaining an independent English Channel carrier and was not interested in a merger with Britain's P&O. Page 17

PepsiCo stock split US drinks group PepsiCo announced a two-for-one stock split, mirroring the action of its rival, Coca-Cola. The move will double the number of authorised Pepsi shares to 3.6bn. Page 17

Chechen rebel leader alive Chechen separatist leader Zelimkhan Yandarbiyev, reported by pro-Moscow authorities as having been killed earlier this week, appeared on rebel controlled television alive and well. He blamed Chechnya's pro-Moscow administration and the Kremlin for spreading rumours of his death. Page 2

Warning to Mediterranean Countries round the Mediterranean face severe environmental problems unless they change their food production methods, the UN Food and Agriculture Organisation warned. It highlighted water shortages, deforestation and erosion as key risks.

Hong Kong says no to China request Anson Chan (left), Hong Kong's chief secretary, said the British colonial administration would not co-operate with a legislative plan to install in the territory, China criticised the refusal, saying British foreign secretary Malcolm Rifkind had earlier this year promised full co-operation. Visiting

Hong Kong, opposition foreign affairs spokesman Robin Cook said a Labour government would give the territory's ethnic minorities full right of abode in Britain if they were stateless after China resumed control. HK talks tough. Page 6; Labour pledge, Page 8; Observer, Page 16

US ships near Liberia US ships move closer to the Liberian coast after the US embassy came under fire during fresh fighting in the capital, Monrovia, between rival warlords.

RAF to leave Germany Britain's Royal Air Force is leaving Germany, where it has had bases since the end of the second world war. The last UK base, RAF Bruggen, will close in 2002. Page 8

Fires ravage Mongolia More than 11,000 Mongolians are trying to fight grass fires that have swept to within 19 miles of the capital, Ulan Bator, killing 16 people. Forests and pastures are tinder-dry after a winter with little snow.

Fayed denies politics plans Mohamed Fayed, Egyptian chairman of London's luxury store Harrods and owner of the Ritz hotel in Paris, denied reports that he planned to form a new political party in Britain.

Chirac attacks supermarkets French president Jacques Chirac accused the country's supermarkets of suburbanising customers into "unfriendly" suburban centres and leaving deserted areas in city centres and the countryside. Page 2

Railtrack values The UK government expects the country's railway lines, stations and signals to be valued at between £1.75bn and £1.95bn (£2.94bn) when Railtrack is privatised. Page 8; Lex, Page 16

Electrowatt Swiss engineering and power group, is to place its 40 per cent holding in UK electronics components distributor Eurodis Electron after failing to find a buyer for the stake. Page 17

STOCK MARKET INDICES		GOLD	
New York Composite	5,288.65 (+18.87)	New York Gold	329.5
Dow Jones Ind. Av.	1,198.80 (+4.28)	London	383.55 (301.5)
FTSE 100	3,960.0 (-11.9)	COMEX	319.5
Nikkei	21,615.01 (-226.29)	US DOLLAR	
US LAUNCHING RATES		New York launchline	£ 1,494
Federal Funds	5 1/4%	DM	1,304.45
3-mth Treasury Bill	5.00%	FRF	1,247.70
Long Bond	5.87%	SPY	1,249.55
OTHER RATES		London	1,495 (1,500)
UK 3-mth interbank	5 1/4%	DM	1,533 (1,535)
UK 10 yr Gilt	6 3/4%	FF	1,173 (1,175)
France 10 yr DAT	6.00%	SPY	1,249.55 (1,247.70)
Germany 10 yr Bund	5.75%	Y	105.115 (104.75)
Japan 10 yr JGB	5.727%	STERLING	
NORTH SEA OIL (Average)		DM	2,295 (2,301.2)
Brent Dated	\$18.00 (18.51)	Takey close	Y 195.3

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Purchasing managers' index goes above 50% ■ Figures indicate continued growth

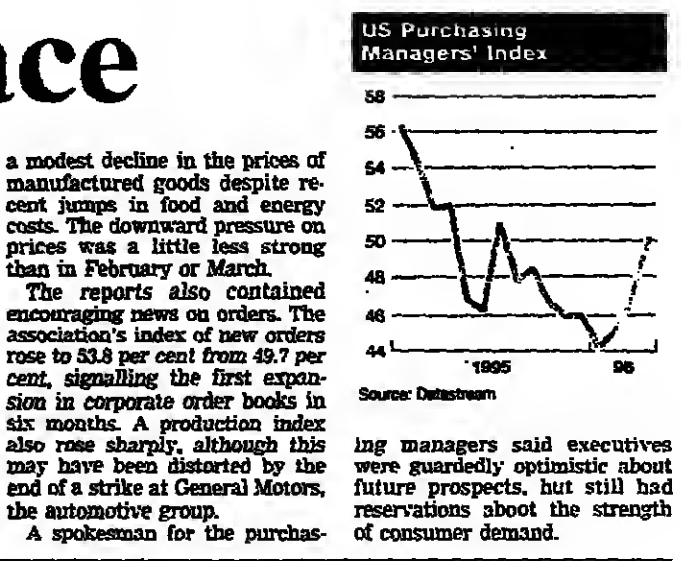
US economy gathers pace

By Michael Prowse in Washington
The US economy continues to gain momentum after a sluggish period earlier this year, figures on the manufacturing and construction industries indicated yesterday.
The purchasing managers' index - a guide to conditions in manufacturing industry - rose to 50.1 per cent last month from 49.9 per cent in March.
This was the first time the index has risen above the 50 per cent level - the threshold for expansion in the sector - since

July. Most Wall Street economists expected a smaller increase to about 48 per cent.
Separately, the Commerce Department reported a 3 per cent increase in construction spending in March - the largest monthly gain in four years. The Conference Board, a business group based in New York, said the index of leading indicators rose 0.2 per cent in March, extending the large 1.3 per cent increase reported for February.
The figures follow other signs of a cyclical rebound, including faster than expected growth of retail spending, big increases in

employment and a revival in consumer confidence. Further information on the state of the economy will come with the scheduled release today of gross domestic product data for the first quarter and April non-farm payroll figures due tomorrow.
Mr Richard Berner, chief economist at Mellon Bank in Pittsburgh, said: "I'm looking for economic growth at an annual rate of 3.5 per cent in the second quarter." The Federal Reserve had to be "wary and watchful" of inflationary pressures although an early increase in short-term interest rates remained unlikely, he said.
Other economists were less optimistic about growth prospects. "The industrial sector is probably no longer declining, but neither does it show any sign of acceleration," said analysts at Merrill Lynch in New York. The group expects only a mild acceleration in growth - to about 2.3 per cent at an annual rate in the second quarter from 1.5 per cent in the first quarter.
The price index compiled by purchasing executives pointed to

a modest decline in the prices of manufactured goods despite recent jumps in food and energy costs. The downward pressure on prices was a little less strong than in February or March.
The reports also contained encouraging news on orders. The association's index of new orders rose to 53.8 per cent from 49.7 per cent, signalling the first expansion in corporate order books in six months. A production index also rose sharply, although this may have been distorted by the end of a strike at General Motors, the automotive group.
A spokesman for the purchasing managers said executives were guardedly optimistic about future prospects, but still had reservations about the strength of consumer demand.



News Corp group in TV card lawsuit

By William Lewis in London
Questionable tax planning and embarrassing management failings have been revealed by a Financial Times investigation into News Corporation, the media and entertainment group headed by Mr Rupert Murdoch.
Details have emerged of the tax avoidance structure operated at a key News Corp group subsidiary and of disguised consultancy payments to executives' foreign bank accounts.
The investigation has also disclosed how internal management

KLM 'considers ending alliance' with Northwest

By Michael Skopnik, Aerospace Correspondent
Northwest Airlines of the US yesterday said KLM of the Netherlands was considering ending the alliance between the two airlines. But the US carrier said it wanted the partnership to continue.
Aviation industry executives have been expecting the alliance to collapse since late last year when KLM began legal action over a "poison pill" scheme adopted by Northwest to protect it against takeover.
An unravelling of the relationship would leave KLM free to seek other partners. It is believed to have had talks with British Airways about an alliance which would create the strongest aviation force in Europe, with bases at London's Heathrow airport and Amsterdam's Schiphol.
Industry officials have speculated that BA and KLM might then form an alliance with American Airlines, which does not have a European partner.
Northwest said yesterday that during a conversation with one of its executives, a KLM official said the Dutch airline was considering three options. The first was to continue the existing arrangement under which the two airlines co-ordinate their passenger schedules closely and sell seats on each other's flights - an arrangement known as code sharing.
The second option was to increase co-operation in areas such as cargo and computer reservation systems. The third option, the KLM official said, was to end the relationship. KLM refused to comment on Northwest's account of this conversation or on the future of its rela-

tionship with the US airline.
Northwest said it wanted to continue its alliance with KLM, which it regarded as "very valuable", and to extend it into new areas. Northwest said its arrangements with KLM brought it an additional \$50m a year in operating profits. It said KLM gained additional operating profits of \$120m to \$170m a year from the alliance.
Northwest said: "We have not initiated any discussion on a break-up, although the legal action by KLM has clouded the alliance. The alliance is benefiting both carriers. We've only scratched the surface of what we could do together."
KLM's legal action followed Northwest's adoption of a scheme to prevent the Dutch airline from raising its stake in the US carrier

Cummins joins Fiat in \$300m engine venture

By Peter Marsh in London
Europe's second biggest truck company and a builder of buses.

Mr James Henderson, chairman of Cummins, said the partnership would "greatly accelerate our sales" in Europe, while Mr Riccardo Ruggieri, chief executive of New Holland, said the partnership would lead to the most advanced diesel engines on the market.
Mr Carl Ahlers, an executive who has worked for all three partners, will head the alliance which will be based near London at a location yet to be decided. The move underlines the UK's good record in setting up new engine development operations, bringing Britain roughly level with Germany among European countries housing important new engine development for the automotive industry.
The new Turin factory will turn out early next century some 240,000 of the new, mainly four- or six-litre, engines a year. Half of them will go to New Holland for use in tractors, and other farm machines such as grape harvesters and baling vehicles.
Iveco and Cummins will share the remaining 120,000 engines a year, for putting into trucks and buses made by Iveco and for a range of applications on behalf of

Continued on Page 16

This announcement appears as a matter of record only

£371,500,000

Management Buyout of

Dunlop Slazenger Group

Maxfli

Led and arranged by

CINVen

Equity provided by

CINVen Funds

Debt facilities arranged and provided by

Natwest Markets Acquisition Finance

Ashurst Morris Crisp acted as solicitors to the company and to the equity investors
Arthur Andersen acted as investigating accountants

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Russian rivals turn out for May Day

By Chrystia Freeland
in Moscow and agencies

Across much of the former USSR, May Day - once a ritualised tribute to Soviet rule - was yesterday transformed into an occasion for passionate, but largely peaceful, political demonstrations.

The battle of the titans was in Moscow, where President Boris Yeltsin and Mr Gennady Zyuganov, his Communist rival in the June 16 presidential ballot, held competing rallies.

Although Mr Yeltsin has been steadily rising in the polls, his crowd of several thousands was outnumbered by Zyuganov supporters who turned up at the statue of Karl Marx near the Bolshoi Theatre to hear their man speak.

Mr Yeltsin, who has ignored the traditional May Day rally in previous years, told his rain-drenched backers: "We have come together at this rally to support a radical change for Russia. We must win the election to confirm we are going the right way and we will win."

In St Petersburg, which supported reformers more strongly than any other Russian city in parliamentary elections last year, an even bigger crowd of Communist supporters took to the streets to celebrate the workers' holiday. Russian agencies said that as many as 35,000 marched down Nevsky Prospekt, the city's famed main street, chanting and carrying red banners.

More than 20,000 people reportedly took to the streets of neighbouring Belarus, many of them protesting at deteriorating economic conditions and some voicing their opposition to the strong-arm rule of President Alexander Lukashenko. Yesterday's demonstration was reportedly more peaceful than a rally on Friday which was violently broken up by police.

● About 10,000 demonstrators in Athens demanded government action to fight unemployment and an end to austerity measures which have seen wages lagging behind the annual 9 per cent inflation rate.

● Two people were killed and six injured when police clashed with workers in Istanbul before the start of a May Day demonstration. The clash began when some workers gathered for a demonstration refused to be searched.

Russian debt deal ready for creditor banks

By George Graham and
Graham Bowley in London

A deal to reschedule \$38.1bn of Russia's debt repayments to commercial banks could be completed as early as the autumn if individual creditor banks accept the details of a package worked out this week in London.

Dentsche Bank, which chairs the Russian advisory committee of the London Club of commercial bank creditors, said agreement had been reached on the outstanding issues.

Detailed documentation on the terms will be sent out in the next few weeks to the several hundred banks which hold Russian debt, with the endorsement of the 13 main creditors who make up the London Club advisory committee.

The London Club proposals follow a provisional agreement last November and a deal signed earlier this week between Russia and the Paris Club of creditor governments for the rescheduling of more than \$40bn of government-to-government debt payments.

Both deals are underpinned by Russia's agreement earlier this year with the International Monetary Fund on a three-year economic reform programme backed by a \$10.1bn loan.

Analysis said that although progress on the London Club deal had been widely expected, it was an important part of Russia's effort to join the international financial community as a member in good standing. They also said the debt talks would help set the stage for a new Eurobond issue later this year.

"These are all signposts on the way for Russia becoming internationally credit-worthy again," said Mr Jonathan Hoffman, a director in economics at CS First Boston. "One signpost was the IMF deal; another is the Paris Club; this is the third; the fourth will be the election."

But western investors warned that Russia's success in attracting foreign capital could also hinge on the outcome of June elections, in which President Boris Yeltsin faces a strong challenge from his Communist rival, Mr Gennady Zyuganov.

Bankers close to the negotiations said it was considered extremely unlikely that the London Club deal could now be held up by objections from individual creditor banks.

Although obstacles of this sort have arisen in some similar reschedulings, such as Brazil's, it is not believed that large holdings of Russian debt have been amassed by any single creditor. Nevertheless, Russian debt has been so widely traded in the secondary market that it is still not entirely clear who holds which debts.

Reconciling claims could now take several months. Although creditor banks hope to finish the process by the autumn, some bankers believe it could drag on into the winter.

The London Club deal will spread \$25.6bn of principal payments and \$7.5bn of accrued interest over 25 years, with a six-year grace period. The first payments will fall due in December 2002.

The negotiations have dragged out over four years, including a one-year delay while the London Club tried unsuccessfully to persuade Russia to abandon its sovereign immunity.

Russia was advised in the negotiations by Cleary Gottlieb, the US law firm, and by SBC Warburg, the London investment bank owned by Swiss Bank Corporation.

Head of union federation threatens to oppose government cuts with 'clenched fist'

Fierce attack on German welfare plan

By Wolfgang Münchau
in Frankfurt

Germany's leading trade unionist yesterday vowed to use a "clenched fist" in the fight against spending cuts and changes in the welfare state proposed by the government.

Addressing 20,000 union members in Berlin at one of more than 100 May Day rallies throughout Germany, Mr Dieter Schulte, president of the DGB union federation, threatened massive opposition to government plans to save DMS0bn (\$33bn) in public spending and to relax laws on sick pay and dismissal.

"Under the pretext of alleged abuses of social benefits the government decided to fight the unemployed, rather than unemployment," Mr Schulte said. "In doing so it has become the tool of employer interests. We have held out our hands for an alliance for jobs, but if others are looking for conflict, they will have to grip our clenched fists."

The unusually militant comments reflect union fears that the government and employers are colluding to roll back the consensus-based welfare state.

Mr Klaus Zwickel, president of the IG Metall metalworkers' union, warned: "We will not hesitate to use every available means of industrial strife."

OTV, the public sector union, promised a "dramatic wage round" if the government pressed ahead with a public sector wage freeze this year.

Mr Zwickel is particularly opposed to government plans to change Germany's generous system of sick pay, which entitles employees to full wages - including bonuses and regular overtime - from the first day of illness.

The government's proposal to limit sick pay to 80 per cent of basic pay would not affect sick pay arrangements in many industries, including the metal and engineering sectors, where the current arrangements are enshrined in collective agreements.

But the trade unions' increasingly confrontational stance suggests that if employers were to terminate the existing contracts, they might risk massive protests, similar to those in the late 1980s when IG Metall secured the current sick pay arrangement.

Yesterday's demonstrations came as an opinion poll suggested that the budget cuts - which also include a postponement of a child benefit increase and reductions in health care provisions - are unpopular with the public at large. The poll by the Forsa research organisation found 72 per cent against the plans and about 90 per cent support for the view that the government was not doing enough to combat unemployment.

Despite the strong sentiments expressed yesterday, it is not clear whether the unions would be able to call substantial strikes at a time of record unemployment. More than 4m Germans are registered unemployed, about 11 per cent of the workforce.

Mr Peter Hintze, general secretary of Chancellor Helmut Kohl's Christian Democratic Union, warned the unions yesterday not "to revert to the old rituals of class warfare".

German employers have given the government proposals a cautious welcome as a move in the right direction, in a comment bound to infuriate the trade unions. "The unions support a merger and 33 per cent are opposed, while in Brandenburg 39 per cent were in favour and 47 per cent opposed."

One reason for such opposition is history. Some Brandenburgers feel a united state would bring a return to the days, both under Prussian and communist rule, when it lost out to the more populous and powerful Berlin.

The PDS has taken up these fears in its anti-merger campaign. In Brandenburg the party compares merger to a return of German unification, when, they say, the east was all but swallowed up by the west.

Mr Martin Matz, head of the liberal Free Democratic party in Berlin, says failure to endorse the merger would have wider repercussions. "The other Länder are waiting to see the result here. If a merger cannot be done here in two states, where the administrative structures are not yet fully developed, then it can never be done in those areas where structures are well established."

Among other states considered ripe for a merger are the city-states of Bremen and Hamburg, which reformers say should be brought together with neighbouring Schleswig-Holstein and Lower Saxony into a single *Nord Staat* of about 12.7m people.



Demonstrators at the troubled Bremer Vulkan shipyard make sure government and employers get their message: "Hands offered. Fists clenched" proclaims the banner.

EUROPEAN NEWS DIGEST

Chirac hits at superstores

President Chirac yesterday accused France's supermarkets of having an "extraordinarily negative" influence in drawing customers into their big "unfriendly" suburban centres and creating "deserted areas" in city centres and the countryside.

The president's broadside against large-scale retailing, which he chose to describe as a "purely French phenomenon which hardly exists anywhere else", came as he received a traditional May Day delegation of small shopkeepers.

His remarks follow the French cabinet's endorsement on Monday of further draft legislation to protect small shopkeepers. The legislation would tighten planning permission for all new supermarkets of more than 300 square metres. The country's large retailers are already up in arms about a government bill to restrict their ability to offer discounts in the interest of banning "predatory pricing".

Mr Chirac's rhetoric may encourage the centre-right majority in parliament to amend government proposals on planning permission by making them tougher still on the supermarkets, as deputies are in the process of doing on retail pricing proposals.

David Buchan, Paris

'Dead' Chechen leader reappears

Mr Zelimkhan Yandarbiyev, the Chechen leader reported dead by Russian news agencies, appeared (left) on local television on Tuesday night and vowed to continue the separatist fight against Moscow until the last soldier. Speaking on a television channel used by the Chechen resistance, Mr Yandarbiyev said there were many fighters who could replace him even if he were killed. The Chechen resistance was prepared to "fulfil the cause to the end," he said. Reports that Mr Yandarbiyev had been killed in a skirmish between feuding Chechen groups spread through Grozny on Monday and were gleefully seized upon by Russian military commanders as evidence the rebel leadership was splintering.

Mr Yandarbiyev, a nationalist writer and a forceful advocate of Chechnya's independence bid in 1991, took over as leader after General Dzhokhar Dudayev was killed in a Russian rocket attack on April 21. Mr Yandarbiyev has pledged he will revenge Mr Dudayev's death, prompting Russian authorities to tighten security in Moscow.

John Thornhill, Moscow

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John Thornhill, Moscow

Spanish unions warn new PM

Spanish trade unions used May Day rallies yesterday to brace themselves for their first dealings with a new centre-right administration.

Both main trade union federations, the General Workers' Union (UGT) and Workers' Commissions (CCOO), called on the incoming prime minister, Mr José María Aznar, to start the talks he promised in his election campaign, and warned him they would fight any cuts in social benefits.

Mr Cándido Méndez, the UGT leader, said at the end of a march in Madrid: "The new government should be pretty clear the unions will not put up with any erosion of our social protection." He warned that any cuts in education, health, unemployment benefits or pensions would bring confrontation.

Mr Aznar promised to start talks on a job-creation pact with the unions immediately after the March 3 elections won by his Popular Party. But he had to put the meetings off while he negotiated instead with regional parties to entice support for a minority PP government.

David White, Madrid

Spain's farmers go anti-French

Spanish farmers plan to stage an anti-French day today in retaliation for the latest resurgence of attacks on trucks carrying Spanish strawberries and other agricultural produce across the French border.

Spain's main farmers' body, COAG, said it would stage countrywide protests evoking the uprising of May 2, 1906, against Napoleonic occupation forces, an event commemorated by a public holiday in the Madrid region.

Along with other farmers' unions, it is calling for a boycott of French farm products and one of its leaders has warned of a violent response if the incidents continued. COAG complains that attacks by what it calls "bands of French vandals" have not diminished in the 10 years since Spain joined the European Union.

David White

Freedom party urges restrictions

Mr Jörg Haider, leader of Austria's rightwing Freedom party, told a May Day rally there were too many foreigners working in the country and said it had to reduce greatly the number of immigrants to fight unemployment.

"In Austria we have 300,000 unemployed and 300,000 registered foreigners," Mr Haider told supporters in the eastern province of Burgenland. "We finally have to consider how to cut back on foreigners in Austria."

Mr Haider, whose party won nearly a quarter of the votes in the general election in December, was immediately attacked by the ruling Social Democrats who accused him of cheap polemics. At 3.9 per cent, Austria's unemployment rate is among the lowest in Europe.

The remarks came as parties began preparing for important municipal elections on October 13 in Vienna, a long-time Social Democratic stronghold with provincial status. Immigrants, who make up 9 per cent of Austria's 8m population, are concentrated in the city.

Reuter, Austria

Poland enters smoke-free zone

A law aimed at limiting smoking took effect yesterday in Poland, where the habit is rife. Indoor smoking in workplaces, public buildings, hospitals and similar sites will be allowed only in designated areas. Cigarettes will no longer be sold singly to those under 18 or in vending machines.

Tobacco advertising will be formally banned on broadcast media, in cinemas and in youth and children's publications. Under the law, 30 per cent of the area of tobacco adverts must consist of health warnings. Within a year cigarette packets will have to carry two warnings, covering 30 per cent of their surface. Poland is an expanding market for the large international tobacco companies. In a country of 38m, 8m men and 4m women smoke 100bn cigarettes a year.

Reuter, Warsaw

Will Berlin knock down its political Wall?

Frederick Stüdemann on a referendum on whether to merge with former eastern state of Brandenburg

Six years since the finances for a new airport in Berlin were approved, the governments of the city and of the state of Brandenburg still cannot agree where to build it.

For locals it has become one of those on-going sagas you don't know whether to laugh or cry over.

What is serious enough, though, is that the dispute is depriving the region of the investment and jobs the new airport would bring.

This Sunday, Berliners and Brandenburgers are being offered the chance to make such costly wrangles a thing of the past when they go to the polls to vote in a referendum on whether to merge.

If they decide to do so, Berliners and Brandenburgers will not only be removing one of the relics of Germany's post-war settlement but also opening the door to further possible mergers among other Länder (states), which would represent an important change to the country's political fabric.

For the Berlin airport debacle also highlights the problems caused by the German federal system, particularly in the case of the country's city-states, whose infrastructure planning relies on the co-operation of a neighbouring Land.

A reform of the Länder system has been proposed by politicians and constitutional experts ever since the Federal Republic of (West) Germany was founded in 1949. In the 1970s a government commission recommended that for a state to be economically viable it should have at least 5m inhabitants, a condition satisfied by only five of the country's 16 states.

Such proposals have always focused on regional pride and political interests. Many powerful politicians are reluctant to see any dilution of their state-based powers which at the federal level are reflected in the fact that the states are represented in the upper house.

For the Berlin-Brandenburg merger to go through, a majority of voters in both states must separately approve the proposal. Voters will also be asked to choose between 1999 and 2002 as a preferred date for it to be completed.

A merger is supported by the leaders of both states - Mr Eberhard Diepgen, the Christian Democrat mayor of Berlin and Brandenburg's Social Democrat premier, Mr Manfred Stolpe, who negotiated a merger treaty last year.

The two leaders argue that a merger would deliver significant economic benefits. Unemployment is high in both states. Berlin is heavily indebted and still struggling with its own reunification. Brandenburg, which is wholly in East Germany, is thinly populated and still heavily dependent on federal subsidies.

Mr Diepgen and Mr Stolpe argue that a single state would bring streamlined administration, common planning procedures and the ability to present

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Berlin and Brandenburg: anatomy of a merger

	Berlin	Brandenburg	Germany		
Population	3.7 million	2.5 million	81.54 million		
Area	898 sq km	29,490 sq km	357,020 sq km		
Capital	Berlin	Potsdam	Berlin		
State capital	Berlin	Potsdam	Berlin		
State capital after merger	Berlin	Potsdam	Berlin		
GDP per capita	DM42,807	DM25,126	DM42,368		
Share of national GDP	4.5%	1.8%	100%		
Public debt per capita	DM18,358	DM6,368	DM24,712		
Unemployment	16.1%	16.4%	11.1%		
Election results					
	Scenario 1999	State 1994	National 1994		
CDU	37.4%	SPD	54.1%	CDU/CSU	41.5%
SPD	23.2%	CDU	15.7%	SPD	30.4%
Greens	13.2%	Greens	2.8%	Greens	7.3%
PDS	2.8%	PDS	2.2%	PDS	1.7%
PDS	14.7%	PDS	13.7%	PDS	4.4%

Source: Berlin Statistical Office, FF.

Serious condition of city's finances revealed

The serious state of Berlin's finances was highlighted yesterday when the Bonn finance ministry disclosed that the city's deficit last year was 36 per cent higher than planned following a slump in revenues, writes Peter Norman in Bonn.

A provisional analysis of the fitness of the Länder (federal states) showed that Berlin ran up a deficit of DM10.1bn (\$6.6bn) last year, against a planned DM7.4bn, and accounted for more than a fifth of the overall DM45.7bn deficit of Germany's 16 Länder.

The city's expenditures rose by 4.3 per cent to DM42.8bn, but ended some DM900m below budget. Income of DM32.3bn was 3.8 per cent below that of 1994. The sharp deterioration in finances reflected a shortfall of more than DM3.2bn in income compared with the budget.

with tax revenues some DM2bn below plan.

Mr Hansgeorg Hauser, a state secretary in the Bonn finance ministry, said the budgetary position in all the states was difficult last year but the situation in Berlin had become acute. He called on Länder to intensify efforts to control spending and urged them to co-ordinate the consolidation of their budgets in a "national stability pact" with Bonn.

The ministry said the five new Länder of eastern Germany had been able to keep their deficits within budget in spite of spending less than planned. Their overall deficit amounted to DM12.6bn last year against a planned DM10.8bn.

The 10 western Länder had an overall deficit of DM23.9bn in 1995, only slightly higher than the DM22.9bn envisaged.

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that the treaty does not offer enough guarantees for jobs, specifically in agriculture and the public sector. Business organisations and trade unions are in favour.

A recent meeting of 1,800 business leaders from across the region welcomed a possible end to competing jurisdictions, which have in the past led to protracted negotiations or out-

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الشرق الأوسط

Future of Gdansk yard in balance

The future of Poland's ailing Gdansk shipyard is in the balance as the Privatisation Ministry sifts through low-price bids. Potential buyers of the yard are Norwegian and German shipowners and a group of US investors, while a South Korean shipyard group hovers in the background.

A team from LG Group, the South Korean conglomerate, visited Gdansk this week, but the company denied reports it had made an offer. The Privatisation Ministry has floated the idea of including Gdansk in an industry-wide holding company and recently proposed to O J Libak and Partners, a Norwegian shipowning group, and to Daewoo, the Korean industrial conglomerate, that they take a stake in the company, which would control the three main yards of Gdansk, Gdynia and Szczecin.

However, until now Libak's focus has been on the more modern and better equipped Gdynia yard, a few miles along the coast from Gdansk, and it has also held talks with the Szczecin yard, considered the most successful of the country's shipbuilders. It will be an uphill struggle for the government to persuade foreign investors to include Gdansk in their future plans.

The Privatisation Ministry is ready to dispose of all or part of its 60 per cent stake in the Gdansk yard's equity, but industry sources believe any potential bidder is unlikely to offer more than a token purchase price and demand in exchange outright control of the yard.

But the assumption of control requires first gaining the consent of the yard's 7,000-strong workforce which owns 40 per cent of the equity. This stake was handed over by the government two years ago.

The workers have already voted to accept 2,000 job cuts but this is not enough to cancel out the shipyard's serious financial problems. Only a

Christopher Bobinski reports from Warsaw on continuing efforts to sell a symbol of Poland's past

third of March's wages have been paid, telephones have been cut and power supplies are limited because of unpaid bills. Last year the yard lost 85m zlotys (\$32m), raising accumulated losses beyond 300m zlotys. Bank Handlowy, the main creditor, has refused further financing and has turned down a plan to write-down its loans as it holds Treasury guarantees on much of its lending to the yard.

But shipowners from Germany, Norway and Denmark recently provided some relief by waiving \$19m in penalty payments.

These were sparked off by delays in delivering four vessels currently under construction.

They also accepted cuts in the standard of equipment of the four ships and agreed similar cuts on a total of 21 ships on order in a package worth up to \$1m per ship. In return they are demanding government guarantees against any losses they might incur if the ships are not completed.

The yard's management estimates that it needs 100m zlotys in working capital to complete ships under construction and additional loans to cover fixed costs worth around 13m zlotys a month.

But if no new owner emerges the government will have to decide whether to recapitalise Gdansk itself - and then face similar demands from other ailing industrial giants.

A last resort is to summon the political courage to close the yard known around the world as the birthplace of Solidarity.

Collective farmer with tsarist ambitions

Last month, Belarusian President Alexander Lukashenko was the guest, receiving kisses from the Russian president and a blessing from the Orthodox Patriarch after signing a union treaty with Russia.

But back home in Minsk, the Belarusian capital, Mr Lukashenko has been having a tougher time, as western observers and local activists have stepped up their accusations that he is turning the Slavic state of 10m people into an authoritarian regime barking back to the Soviet Union.

At a time when many other former Soviet cities are swiftly shedding their communist skins, in its outward appearance Minsk has become a throwback to the ancient régime. A towering statue of Lenin dominates the city's central square and nearby the republic's Soviet era red flag, which has been restored as the nation's official symbol, flutters proudly.

Belarusian politicians and their western sympathisers are ever more troubled by signs that Mr Lukashenko is reclaiming the substance, as well as the symbols, of an earlier era.

Last week his security forces brutally broke up a demonstration by more than 40,000 protesters. At least 200 people, some of them uninvolved bystanders, swept up in a police dragnet, were arrested and held incommunicado for three days.

Some activists could face criminal charges and lengthy prison sentences. Leading activists opposed to Mr Lukashenko have had their homes searched and been



Hardliner: Belarusian President Alexander Lukashenko

arrested by police. A few others have gone into hiding.

The crackdown, and Mr Lukashenko's gradual erosion of the independence of the judiciary, the media, parliament and even private business, have led some observers to accuse him of building "a police state" which is reminiscent of a "Latin-American style junta". Surrounded by a

bevy of beefy but nervous aides in his official residence, Mr Lukashenko is unrepentant.

In an interview with the Financial Times, the president described last week's demonstration, which was a protest against his government and his hopes of forming a full political and economic union with Russia, as "a meeting of the fascist opposition". The

demonstrators, he says, were "drunk and stoned", and he claims the journalists who were beaten at the rally were victims of the demonstrators and not of his security forces.

The demonstration was one of four mass opposition rallies held over the past month - including one yesterday. "We reacted calmly, we didn't provoke anyone," he said. "Let me assure you that if we had wanted a fight there would have been a real one. In democratic countries... they would just hit such people over the head with a truncheon and been done with all discussions."

Mr Lukashenko, aged 40 and a former collective farm manager, is not embarrassed by domestic accusations - backed by a recent US State Department report on Belarus, which accused him of muzzling the media.

According to the State Department, Mr Lukashenko enjoys "essentially complete control of the broadcast media" and has banned the main opposition newspapers from using the state postal services or the state's monopoly printing press, forcing them to publish abroad and rely on less effective private distribution channels.

Mr Lukashenko dismisses these charges, arguing that the opposition press is mentally unbalanced.

"If you read what the opposition press writes about me you would simply be horrified and you would say, they must be deranged people," he says.

Nonetheless, in what Mr Lukashenko holds out as an example of Belarusian liberalism, "we have not closed a sin-

gle publication, although we ought to have done so, purely according to laws."

The Belarusian opposition chafes at Mr Lukashenko's cavalier disregard for the civil liberties of his compatriots, but what pains them most is the argument which is the president's trump card: his tremendous public popularity.

'For me the will of the Slavic peoples is a law. If their will is to send me far beyond the borders of our state I will go'

The recent demonstrations suggest that a sizeable number of Belarus's normally biddable people have become angry about the slide into authoritarianism.

But the silent majority, or at least 50 per cent according to independent pollsters, is still firmly behind the populist leader who was a political unknown until his surprise victory in Belarus's 1994 presidential elections.

"Am I a dictator or not?" Mr Lukashenko asks. "With such extraordinarily high popularity, why would I need to run the country with dictatorial methods?"

Belarus's despairing liberals attribute Mr Lukashenko's

sustained popularity to the downtrodden, Soviet-era mentality of their people.

Seventy years of communism, they say, have taught many Belarusians to admire an iron-fisted leader who makes populist promises to the masses and keeps the streets clean, no matter what he may do to the chattering classes.

But some observers warn that Belarus, which today looks back to the Soviet past, could also be a harbinger of Russia's future.

Mr Lukashenko, who is the strongest advocate of a full political union between the two Slav states, is said to cherish hopes of one day being the leader of that greater Russian-Belarusian confederation.

Mr Lukashenko does not openly admit to such ambitions. But he is confident that "80 per cent" of the Russian people are already his supporters.

He coyly concedes: "For me the will of the Slavic peoples is a law. If their will is to send me far beyond the borders of our state I will go."

As the contest between Mr Yeltsin and his communist rival, Mr Gennady Zynganov, intensifies in Russia, Mr Lukashenko's solemn pledge seems like comic relief from the main event.

But Mr Lukashenko is a skilful politician who has mastered the trick of catering to the post-Soviet electorate's dual craving for populism and for order. As the Belarusians have learned, he is an easy man to underestimate.

Chrystia Freeland

Swissair tries to defuse Geneva-Zurich row

Swissair yesterday announced a series of improvements in its services from Geneva in an attempt to curb criticism of its decision to switch 13 of 15 long-haul flights from the city's airport to Zurich airport, Renter reports from Zurich.

The government, which has been critical of the airline's proposal, said it would look into the "consequences" of the Swissair measures. Last week federal and local officials asked the airline to reconsider its plans to transfer Geneva's connections with the

Middle East, West Africa and Los Angeles to Zurich, with Geneva retaining links with New York and Washington as well as all European connections.

The controversy has highlighted tensions between western, French-speaking Switzerland, where Geneva is the dominant city, and the German-speaking east, centred on Zurich. There were also protests from businesses operating in the Geneva area.

Swissair said yesterday it would go ahead with its plan to ease interconti-

ental connections to Geneva after the reductions with 10 daily shuttle flights between Geneva and Zurich starting in November.

Passengers on the 30-minute shuttles to Zurich would have a transfer time of 40-60 minutes for the main intercontinental flights, a much quicker transit time than at most European airports. Ticket prices for long-haul flights would be the same whether boarding in Zurich or Geneva.

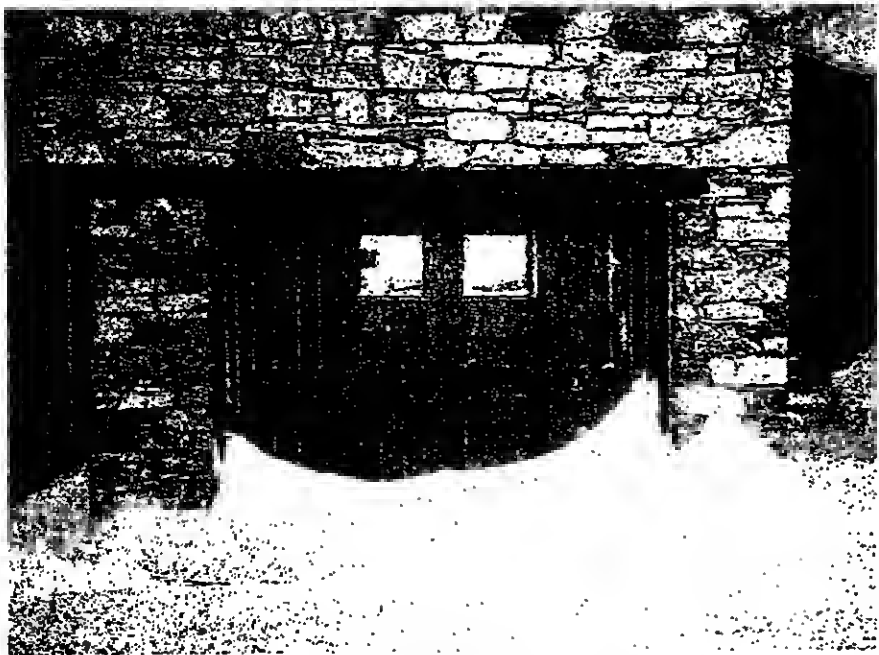
Swissair said airlines from coun-

tries which did not have air traffic agreements with Switzerland should be encouraged to gain access to the Swiss market in general and Geneva in particular. This would require mutual liberalisation of air traffic rights by Switzerland and the other countries involved.

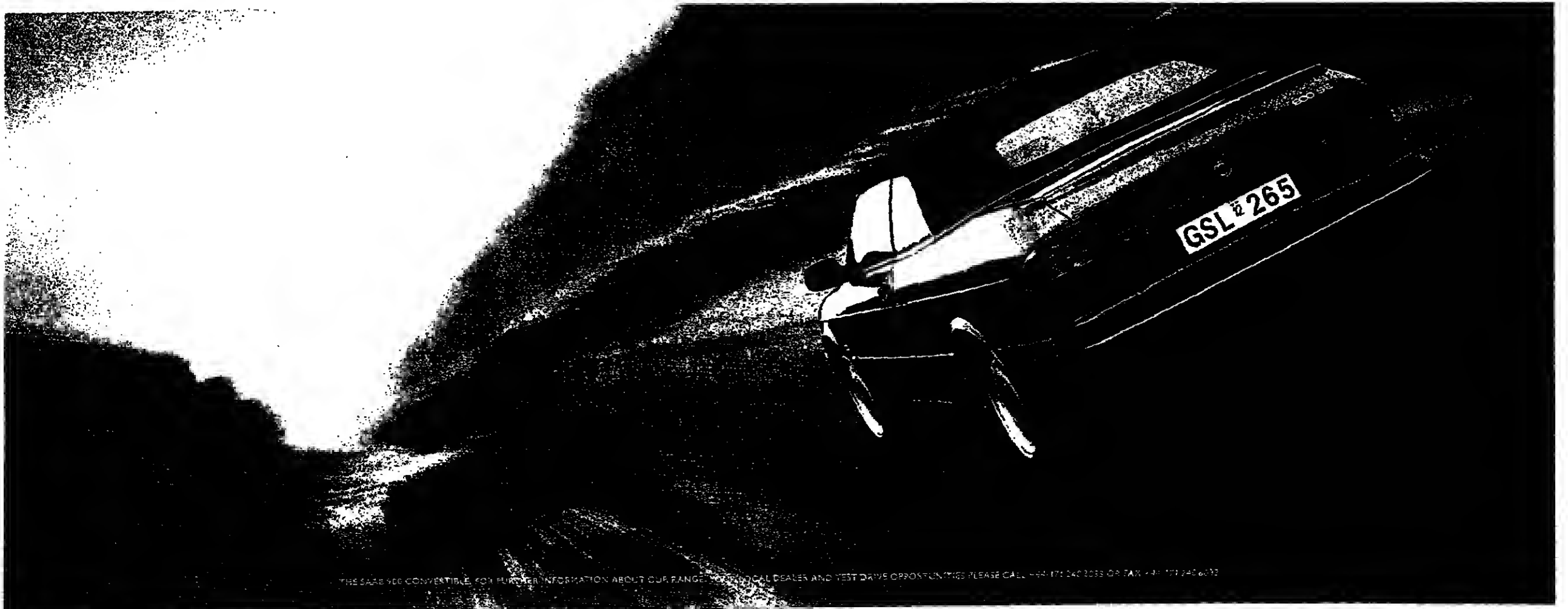
The company said it would continue to offer more than 500 flights weekly between Geneva and north Africa, New York, Washington and many European destinations. Its regional subsidiary, Crossair, would

add extra European flights from Geneva. "Swissair and Crossair currently serve 40 destinations via direct flights from Geneva. The growth in Crossair's European service over the last five years will continue," it said.

Swissair rejected a suggestion by Geneva politicians that Crossair should be allowed to offer intercontinental connections from Geneva. "Solid, long-term economic health is needed for the Swissair group to meet the demands that are being made of it," Swissair said in its statement.



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US keeps rest of world hanging on the line

Frances Williams on why attempts to agree a global pact on liberalising telecoms trade have been delayed

Mr Renato Ruggiero, World Trade Organisation director general, put on a brave face yesterday after negotiators failed to meet Tuesday's midnight deadline for agreeing a global pact on telecoms liberalisation and instead put off a decision until February 1997.

He said he hoped for an even bigger telecoms liberalisation package than "this is certainly the spirit in which I have presented the compromise: to safeguard what has been achieved, to safeguard the timetable and to give the possibility of an improvement."

The decision ended two days of frantic negotiations on how to prevent the collapse of the talks, once it became clear on Monday that the US did not intend to join an emerging accord.

Washington's trading partners did not disguise their frustration that their efforts had again been undermined by a US administration seemingly more concerned with appeasing narrow domestic political and industrial interests than with securing the wider benefits of a multilateral deal.

This time, moreover, the European Union was in no position to salvage an accord as it did for financial services last summer. Without the US market - accounting for a third of world telecoms revenues of \$513bn in 1994 - an accord would have little value.

Instead, the 53 countries taking part in the talks - together accounting for over nine-tenths of world revenues - have agreed to put their best mar-

ket-opening offers "in the fridge" for further improvement by February 15. All being well, the WTO telecoms accord will come into force on January 1 1998 as planned.

However, it will also be possible for countries, including the US, to downgrade or withdraw their market-opening proposals, with the risk once again that a deal could collapse.

Washington, whose own ambitious offer would have opened almost all domestic and

international services to foreign competition, rejected a deal this week for three main reasons:

- It did not have the necessary "critical mass" of good quality offers from others, especially in Asia. Ms Charlene Barshefsky, acting US trade representative, said more than 40 per cent of world telecom revenues and more than 34 per cent of global international traffic were not covered by acceptable offers.
- Against that, a number of Latin American and eastern European countries made what even the US concedes were good offers to boost competition in their markets. Some 30 countries also agreed to adopt

Washington wanted the right to reject applications to operate international services out of the US from carriers with or associated with a home-country monopoly.

The worry was that monopoly operators charging high prices to connect calls in their domestic market could take unfair advantage of cheap international rates on calls out of the US and other liberalised markets.

The EU and others said the US position was tantamount to imposing reciprocity conditions, contrary to WTO non-discrimination rules. However, Washington rejected as inadequate an alternative "competitive safeguards" clause which would have allowed national competition authorities to impose conditions on all licence holders to prevent abuse.

● The US said it intended to withdraw satellite services from its offer because only about 10 participants had guaranteed US access to their own satellite markets. The EU claimed this was really an attempt to hamper competition with US-based companies planning worldwide satellite-based mobile telephone systems.

There are some reasons to hope a deal may be easier to strike next February. Most governments, faced with the rapid

pace of technological advance and increased competitive pressures, are moving towards ever-greater liberalisation.

A number of countries - among them Australia, Brazil, Switzerland and Thailand - plan legislation to increase competition in their telecoms markets. South Africa, an observer to the WTO talks, said on Tuesday it hoped to submit an offer in the near future.

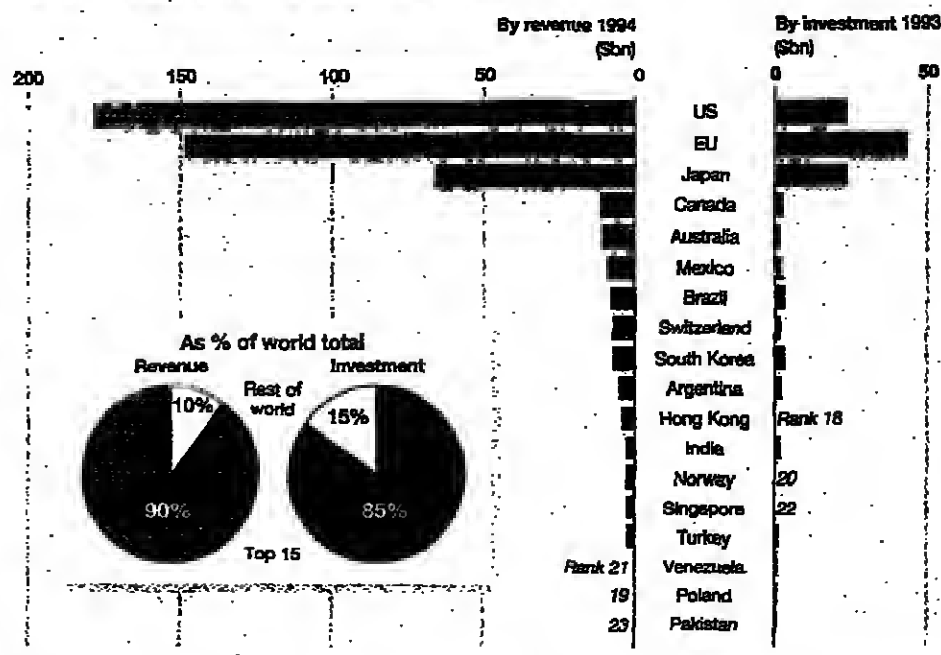
The economic stakes are high. According to the Washington-based Institute for International Economics, a telecoms accord could save users in rich and poor countries more than \$1,000bn over the next 12 years in lower charges, better service and improved technology.

Foreign investment would also help developing countries raise the \$60bn the World Bank says they need to spend over the next five years to bring their telecoms systems up to scratch.

But a success in telecoms would also give a boost to the multilateral trading system by showing that the WTO can effectively negotiate trade liberalisation in new domains like services, investment and competition policy.

The postponement of the telecoms talks follows only a partial deal in financial services last year while talks on maritime services, the third set of negotiations left over from the Uruguay Round, look set to founder in June.

World telecoms: the market leaders



As % of world total

Revenue	Rest of world	Investment
90%	10%	85%
Top 15		

US and Japan agree truce on aviation rights

By Gerard Baker in Tokyo

Japan and the US yesterday agreed to a temporary truce in their dispute over passenger aviation rights between the two countries.

Negotiators from the two sides settled on a short-term settlement "to avoid a battle of imposing sanctions on each other during the high summer season," said Mr Jiru Hanyu,

Japan's senior negotiator at the talks in Washington. The discussions failed to bridge the substantive gap over how to begin reviewing the passenger section of their 40-year-old bilateral aviation treaty.

Further talks aimed at reaching a lasting settlement are scheduled in Tokyo for June 3 and 4.

Under the terms of the truce, both sides will temporarily

approve outstanding requests by airlines for new flights that have been deferred because of the dispute.

The US will allow Japan Airlines (JAL) to operate three weekly flights between Tokyo and Kona, Hawaii, from tomorrow until October 26. JAL will also be permitted a rise in the number of flights from Sendai to Honolulu from three to seven weekly for a five-week

period beginning tomorrow.

In return, Japan will allow United Airlines to double its weekly flight frequency between Los Angeles and Tokyo from the current seven to fourteen for the same five-week period, and to fly seven weekly flights from Kansai International Airport in Osaka to Seoul until October 26.

Mr Hanyu, counsellor for international aviation at the

transport ministry, said the period of only five weeks for the Sendai-Honolulu and Tokyo-Los Angeles operations represented a form of "hostage-taking", to ensure both sides lived up to commitments made for resuming talks next month.

At those discussions the two countries will again try to settle their long-standing dispute, which centres on differing interpretations of the 1952

bilateral treaty. The main question is one of "beyond rights" - whereby US airlines are allowed to pick up passengers in Japan and fly them on to destinations in Asia.

Japan claims the treaty allows such rights only as secondary to the main US-Japan traffic. But a significant proportion of the US airlines' passengers in Asia now originate in Japan.

WORLD TRADE NEWS DIGEST

Brittan set for Tokyo chip talks

Sir Leon Brittan, the EU trade commissioner, will discuss trade in semiconductors when he visits Japan with 30 European businessmen next week. Mr Tomio Tsutsumi, vice minister of the Japanese Ministry of International Trade and Industry, said the two sides would discuss European participation in the talks between Japan and the US over the extension of the bilateral semiconductor accord. The US and Japanese governments are currently wrangling over the extension of the bilateral trade agreement, which sets a quota of foreign market share in Japan's semiconductor market. The accord expires on July 31.

Along with Japan, the EU is opposed to an extension of the agreement, but it is calling for a new semiconductor trade framework which involves Europe. *Emika Terazono, Tokyo*

VW to invest in India

Volkswagen, Europe's biggest carmaker, is the latest vehicles group to unveil plans for the expanding Indian market, where it intends to establish a joint venture with Eicher Motors. The deal involves cars from VW's Audi and Skoda subsidiaries. Audi plans to introduce its A6 executive saloon, while Skoda, the Czech carmaker, expects to launch its Felicia model by the end of this year. The Skoda models will at first be imported as semi-knocked down kits. However, the company has ambitious plans to raise output from about 100 cars in this year to 60,000 units a year by 2000. Audi has more modest aims for its executive model. Initial production plans for the A6, which will cost about Rs700,000 (\$20,488), envisage output of 6,000 units a year. *Industry Staff, London*

Greeks to market Tirana centre

DYZ Mihalos of Greece, part of an international consortium of property consultants, has been appointed to market the World Trade Center in Tirana, the Albanian capital. The development by Di Vincenzo Estero of Italy is claimed to be the first large-scale commercial office project in the city. The 30,000 sq metres development has been designed to cater for companies seeking to establish in Albania. It will be linked to a network database linking more than 300 World Trade Centres in other countries and provide occupants with market information, advice on importing/exporting as well as secretarial and translation services.

The first accommodation is due to be completed by early 1998. *Andrew Taylor, Construction Correspondent*

An Anglo-Malaysian joint venture will manage the construction of 275m of new facilities, including south-east Asia's largest covered car park, at Sepang's new international airport south of Kuala Lumpur, Malaysia. The contract has been awarded to SSP-TBV, a joint venture between the project management arm of Tarmac, the UK contractor, and Sepakat Setia Perunding, Malaysian consulting engineers. The new international airport due to open in 1998 in time for the Commonwealth Games will cater initially for 25m passengers a year, rising eventually to 80m. *Andrew Taylor*

Three Swedish companies, Tele6, Telenordia and Benverket, and Danish telecommunications group Tele Danmark will work on a new undersea fibre optic telephone cable link between Denmark and Sweden. The project, due for completion in October 1996, involves sinking a cable with capacity for 30,000 telephone calls between Elsinore, north of Copenhagen and Helsingborg across the narrow straits separating the two countries. *Reuters, Copenhagen*

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Soap smugglers clean up at Lever Brothers' expense

High tariffs create opportunities for illegal trade, but multinational consumer groups still see prospects for investment in Pakistan

Free trade is a wonderful thing, but not when smugglers are the beneficiaries at the expense of legitimate business.

So say Pakistani companies such as Lever Brothers Pakistan, part of the Anglo-Dutch Unilever group, which face fierce competition from illegal traffic in consumer goods. By evading import duties and taxes, smugglers can offer goods at very competitive prices and sharply reduce the sales and profits of local manufacturers.

The lawlessness in neighbouring Afghanistan and in the tribal areas on the Pakistani side of the frontier has made life particularly easy for the smugglers, who trade in everything from cars and fertiliser to tea bags and soap.

Afghanistan is in effect a duty-free zone, and the abuse of transit trade arrangements, whereby goods supposedly destined for Afghanistan have been imported through Karachi and eventually diverted back to the Pakistani market, has exacerbated the problem.

Take Lux soap, a Unilever brand so universally popular that it can be traded almost like a commodity. A trader can buy a tonne of Lux soap bars in, say, Dubai, Hong Kong or Singapore for about \$1,500, equivalent to Rs57,000; the smuggler's additional costs for transport, finance and bribing gunmen at roadblocks probably amount to about Rs20,000, making his total cost about Rs77,000 a tonne.

To make the same Lux soap in Pakistan, Lever Brothers says it spends about Rs84,000 a tonne. So far so good. But it must also pay an additional Rs37,000 in import duties for its raw materials, sales tax and excise duty, and it spends Rs4,000 a tonne advertising the brand. That brings its total costs to Rs95,000 a tonne. It is not hard to see why smuggling is profitable.

Soap smuggling has eased because the Pakistani government has put a stop to the Afghan transit trade for many categories of imports. But Lever now faces a smuggling problem with another of its products - tea, which is also



A Rawalpindi shopkeeper displays smuggled soft drink cans which carry a higher profit margin than Pepsi produced under licence

confident this large consumer market - with a population of 130m - will continue to grow. Unilever is planning to invest Rs1.5bn in expanding its food interests, especially ice cream and processed vegetables.

It is also in the throes of rationalisation. A merger is planned between Lever Brothers, in which Unilever has a 70 per cent stake, and Brooke Bond Pakistan, where Unilever has 40 per cent, to create a new company called Unilever Pakistan.

The Unilever parent brought Brooke Bond International in 1984 and the Pakistan merger would be the last of a series of similar deals that have taken place in India, Sri Lanka and elsewhere.

Mr Cronch says there are three motives for the merger: savings from economies of scale; ending competition between two Unilever brands of tea (Lipton tea is sold by Lever); and the creation of a Pakistani group strong enough to implement Unilever's ambitious programme for increasing its presence in the processed food market.

Lever launched Wall's ice cream in Pakistan only a year ago and, encouraged by the response of consumers, is eager to expand.

It also wants to move into tomato products, such as ketchup, and chilled vegetables for the growing number of urban shoppers. There is a plentiful supply of good quality local produce, but distribution is poor. In four or five years, the company is likely to look at making prepared meat products and fish.

Pakistan, in short, is moving towards a modern consumer society. At present, most of the ice cream consumed is unbranded "kuli" made by local artisans, and most people wash their clothes using semi-industrial bar soap rather than the kind of washing powders made by Unilever.

But products such as Lux and Wall's ice cream are making inroads. And there is one good thing about ice cream: it has to be kept cold, which makes it hard to smuggle.

subject to heavy taxes. "Every one of our products is carrying a huge duty burden," says Mr Anthony Cronch, commercial director of Lever Brothers Pakistan.

Both Pakistani and foreign business executives say the problem is not just the existence of smugglers, but the fact that the incentives for them to smuggle are so high.

The tax burden on legitimate companies, they say, is much too heavy because governments look at industry more as a source of revenue than of growth and employment.

The import tariff regime is not organised as it should be to impose low tariffs on raw materials and high ones on finished goods that compete with

local manufacturers. Pakistani industrialists also complain that their companies are taxed because they are easy to tax, while the wealthy landowners still pay almost nothing because agriculture is largely exempt from taxation - and because most politicians are landowners.

Although the government of Mr Benazir Bhutto is taking tentative steps to broaden the tax base and is moving towards a reduction of import tariffs in line with international trade agreements, it is likely to be several years before industry finds its tax burden greatly lightened.

In the meantime, companies such as Unilever have not given up hope. Instead they are

Victor Mallet

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for p talks
Stoner will discuss...
Tirana centre

World football body faces TV rights row

By Jimmy Burns

THE leadership of Fifa, world football's governing body, is facing a potential boardroom revolt over its controversial handling of future World Cup marketing and television rights.

European members of Fifa's executive committee are planning to try to force Mr Joseph Blatter, the organisation's general secretary, and Mr Joao Havelange, his Brazilian president, into making the contracts part of an open end transparent bidding process of a meeting scheduled for the end of the month.

Mr Blatter was hoping the committee would accept unconditionally his interim report on the negotiations. But it emerged yesterday that Fifa's powerful European lobby will reject it unless he convinces them that negotiations on the contracts are being conducted in a fair and open manner.

The warning was issued yesterday on behalf of the 25 European members by Mr David Will, Fifa's Scottish vice-president, after two leading sports companies claimed they were being deliberately excluded

from a serious discussion of the contracts in contravention of earlier public assurances that there would be an open bidding process.

The growing row over the contracts in recent weeks has included critical statements of the Fifa leadership by two other executive members: Mr Jack Warner, president of the American footballing confederation, and Mr Chung Mong-Joon, the South Korean vice-president of Fifa.

Yesterday, Mr Will said: "This is an issue that European committee members feel very strongly about. There should be an open marketing bid and each bid should be judged on its merit." He added: "I am obviously concerned and want to know what's going on."

Mr Will is a close ally of Mr Lennart Johansson, the president of Uefa, Fifa's counterpart in Europe, who is hoping to succeed Mr Havelange as president of Fifa.

He was speaking after it emerged that Mr Mark McCormack had presented to Mr Blatter about the way his initial bid for the television contracts for the World Cup in 2002 had been handled.

In a letter dated April 26 to Mr Blatter, a copy of which has been made available to the Financial Times, Mr Eric Drossart, the vice president of Mr McCormack's International Management Group, claims that "preferential treatment" is being given to Fifa's long-term marketing agent ISL, and the European Broadcasting Union consortium which already has the TV rights for the 1998 World Cup.

"Whilst I welcome the apparent invitation from Fifa to be involved in the bid process for World Cup rights, there are glaring inconsistencies concerning the basis on which the rights are being made available... It is difficult to believe that Fifa genuinely wish to consider our offer on a properly competitive basis," Mr Drossart states.

IMG's move follows a similar protest from Team, the Lucerne-based marketing arm for the Champions League run by Uefa, and within days of confirmation that Mr Rupert Murdoch's News Corporation was considering making a multi-billion dollar bid for the world broadcasting rights for the 2002 and 2006 World Cups. Within Fifa's executive com-



Havelange: urged to make bidding process open and fair

mittee, there is growing concern that Mr Blatter, with the tacit endorsement of Mr Havelange, is resneing on a promise of an open bidding process made to committee members in December.

Mr Blatter has told committee members that he is continuing negotiations with ISL and the EBU-led consortium even though an option on exclusive negotiation rights for the two groups expired at the end of February.

The executive committee has been seeking to reform Fifa's leadership structure. Fifa headquarters were

closed yesterday because of May Day. But last month Mr Blatter wrote to IMG and Team saying that, while it was continuing negotiations with ISL and the EBU-led consortium, it was inviting proposals from other "interested parties" on the basis of minimum conditions for the 2002 and 2006 world cups by May 15.

Both Team and IMG are claiming that the deadline they have been given and the unclear way in which the minimum conditions have been laid out have put them at a huge disadvantage in a serious bidding process.

Pact will have little effect, say abolition groups

UN edges close to accord on landmine restriction

By Frances Williams in Geneva

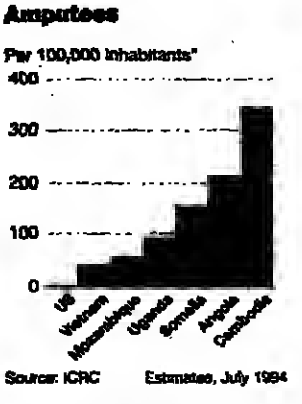
Negotiators said yesterday they hoped a United Nations pact to restrict the use of anti-personnel landmines would be agreed tomorrow, despite last-minute objections by Pakistan.

The accord, designed to strengthen a 1980 UN convention on inhumane weapons, will bar or limit the use of certain kinds of mine. But it will fall far short of the outright ban now being urged by many humanitarian organisations and more than 30 governments, the latest being Australia, Germany and Britain.

Groups campaigning for abolition say the accord will have little impact on the huge toll of civilians killed or maimed by mines, put at 30,000 a year. The UN estimates that some 110m mines have been laid in 64 countries, among the worst affected being Cambodia, Angola, Somalia, Mozambique and Afghanistan.

However, many countries, including China, Russia and India, say they still have a military need for mines to defend their borders.

Admitting that the accord was a modest step, Mr Johan



use of non-detectable anti-personnel mines and require all mines to be self-destructing and self-deactivating except in guarded fenced-off minefields.

However, the anger of humanitarian groups, this requirement would not come into force for nine years - a delay insisted on by countries with large stockpiles of non-detectable mines.

The groups also argue that self-destruct and deactivation devices are inherently unreliable, though the draft treaty stipulates that only 1 in 1000 mines should still function after 120 days.

In addition, the revised treaty would ban the export and transfer of prohibited mines from the date of entry into force, though countries have agreed to make this operative immediately. About two dozen states, recently joined by China, are currently observing a UN moratorium on all or some mine exports.

The treaty would also extend the convention to internal conflicts, put the responsibility for clearing mines on those laying them, and make violations of its provisions a war crime as defined in international law.



Shifting sands of influence in central Asia

Gillian Tett reports on a new role for an old cold war institution

Mr Kandil Karimov, a shrunken Tajik peasant, stood by his partly ruined house in despair. "My neighbour will kill me - he has already taken half my land," he said, gesturing at the muddy patch where his prized pomegranate trees were recently cut down by a fellow villager.

Three years ago some 75,000 Tajiks fled to Afghanistan after a bloody civil war. Though many, like Mr Karimov, have returned, some have been killed and others harassed.

Now Mr Karimov has an unlikely champion. Earlier this year the Organisation for Security and Co-operation in Europe asked the local Tajik authorities for a legal review of his case.

Whether Mr Karimov will win is unclear. But far more is at stake than the pomegranate trees.

For the OSCE's presence is one sign of a broader shift now under way in the west's involvement in this geo-politically sensitive corner of the former Soviet Union.

In recent months the OSCE has been attempting to reinvent its role. The experiment is still in its early stages. But some diplomats are already wondering if the OSCE, rather than the UN, might be the group best equipped to serve the west in attempts to contain the region's turbulence.

When the OSCE was set up in 1975, it was billed as a conference on military security between the communist bloc and the west. But the collapse of the Soviet Union in 1991 meant that, because it was deprived of its traditional role as a buffer in Europe, some diplomats suspected it would simply fade away.

In late 1994, however, it made a last-ditch attempt at renaissance. It changed its name - from the Conference for Security and Co-operation - and announced that it intended to spread democratic values and act as an "early warning" system for ethnic conflict.

Some western diplomats remained cynical. With a budget of \$30.6m, it had limited resources. And its cold war tradition of giving an equal voice to all members - however shocking their human rights record - fuelled suspicions that it lacked clout.

As one western diplomat says: "The OSCE has usually been so careful not to offend governments that it barely has teeth."

This scepticism was not entirely squashed when the OSCE organised a conference

on regional security in Uzbekistan and the Tajik capital Dushanbe last week. Although Mr Gancho Ganchev, the OSCE representative in Tajikistan, criticised Tajikistan's democratic record, the language remained polite - and neither the Tajiks or Uzbeks showed much sign of taking western-style human rights values to heart.

Nevertheless, this public diplomacy is misleading. For the real test of the group's work - and future - now lies not in the bland conferences, but its new self-appointed grassroots work.

One sign of this has been the OSCE's appointment - on a US initiative - as a monitor for elections in Bosnia. However, a second test is a recent request from the UN High Commissioner for Refugees that the OSCE take over its work in Tajikistan.

Since the UNHCR left the republic last year, the OSCE is now running three field stations which seek to uphold human rights and encourage peace, partly by taking up disputes such as Mr Karimov's.

These operations have been surprisingly effective so far. Indeed the factor that has sometimes been the OSCE's greatest weakness - its principle of consensus - has given it an important advantage. For the fact that the Tajik government itself is a member of the OSCE has allowed OSCE officers considerable leverage over local Tajik officials.

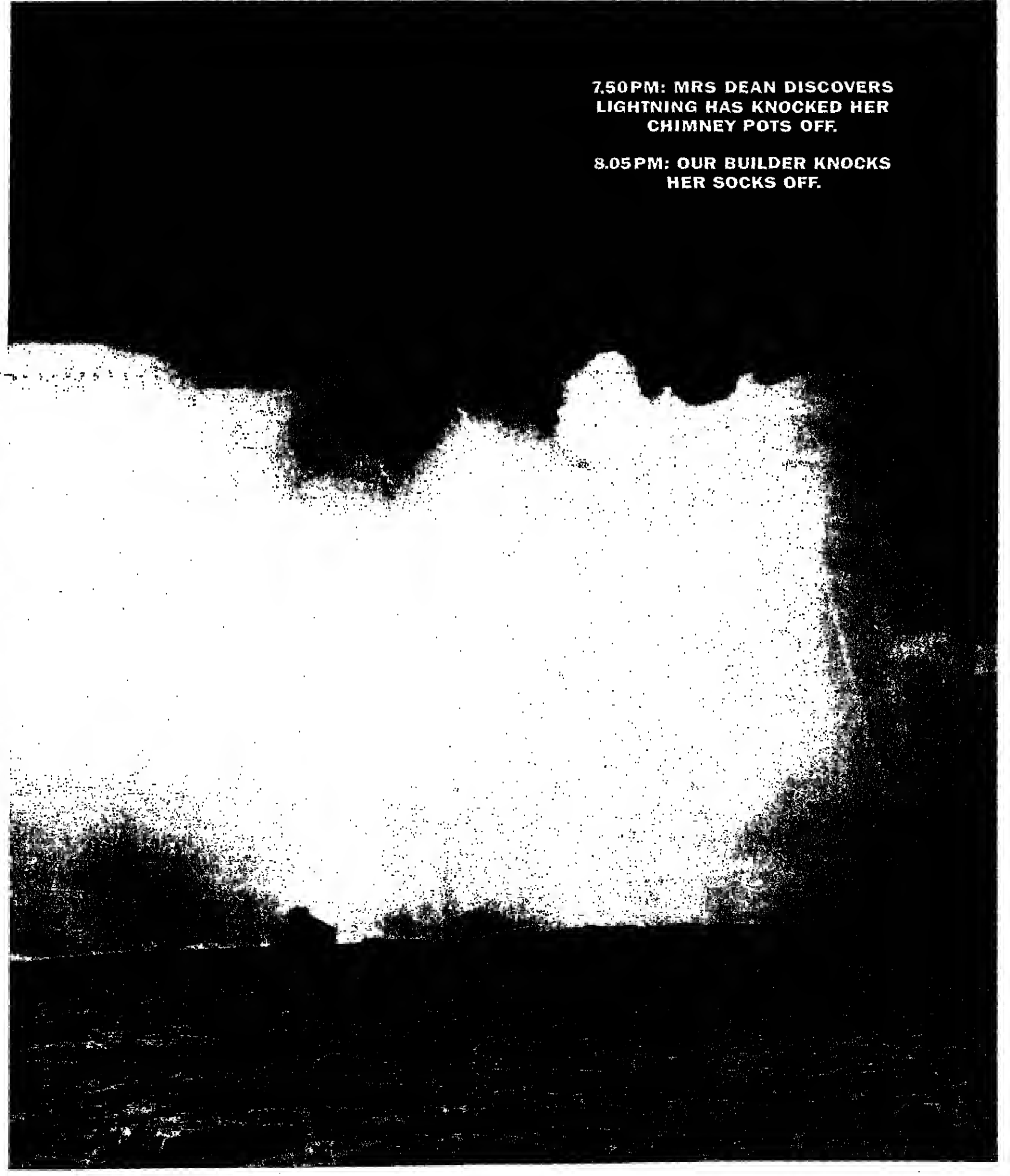
If the experiment is successful, some officials hope the group could move into other UN-type work in the future.

Meanwhile, continued skirmishes along the Tajik-Afghan border are casting doubts on the role of Tajikistan's UN military observers, who are reported to be costing some \$2m a year.

OSCE officials insist that the organisation is still a long way from assuming any direct role as military observer. However, if the Tajik and Bosnian operations prove successful, the possibility might move on to the agenda.

Few western diplomats want to allow Russia an entirely free hand in the region. But equally few have any faith in the effectiveness of an over-stretched and disillusioned UN as regional policeman.

And with Tajikistan likely to remain turbulent for many years, it is not simply Mr Karimov who has reason to hope that the OSCE's mission turns out to be effective.



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NEWS: ASIA-PACIFIC

Japan's vehicle sales fall in April

By Gerard Baker in Tokyo

New vehicle sales in Japan fell in April for the second straight month, according to figures published by the Japan Automobile Dealers' Association yesterday. Registrations of new vehicles dropped 0.1 per cent on a year earlier to 374,405.

The main reason for the fall was a big drop in sales of commercial vehicles. Trucks declined 2.6 per cent to 113,182 units, while buses fell 13.3 per cent to 1,593 units.

A slight rise of 1.2 per cent in sales of passenger vehicles to 254,830 units was not enough to offset the commercial side's slump.

Once again, the figures showed the growing Japanese taste for large, imported cars. Of the total, foreign-made vehicles made up 9 per cent, at 33,043, a jump of 23.7 per cent from a year before.

Of the leading Japanese car makers, only two, Honda and Suzuki, reported sales growth. Toyota, the largest, saw new registrations drop 4.9 per cent; Mazda, now controlled by Ford of the US, reported a 0.1 per cent decline. The biggest fall was registered by Isuzu, whose sales dropped 42.9 per cent.

Car and truck sales had been rising steadily since reaching their low point in the current cycle in the summer of 1994.

An association official played down fears of a stalling recovery. "We cannot tell whether the upward trend until February has changed or not without seeing sales figures for one more month," he said.

Japan's foreign exchange reserves reached another global record of \$205.7bn last month, the finance ministry said yesterday. The monthly increase of \$1.7bn was the thirtieth straight rise, bringing total reserves to a record high for the fifteenth consecutive month.

But the increase in April was considerably below the average monthly rise in the past two years, reflecting somewhat subdued intervention in foreign currency markets by the Bank of Japan.

US rejects India, China funds claim

By Edward Luce in Manila

The US yesterday rejected demands by China and India that they be made eligible for the Asian Development Bank's soft-loan window which extends subsidised loans to poorer Asian nations.

Despite being technically eligible for loans from the Asian Development Fund, the two countries have been excluded due to a shortage of donor funds, largely the consequence of arrears run up by the US.

HK call to back special Asia bond clearing network

By Louise Lucas in Hong Kong

The Hong Kong Monetary Authority yesterday urged the Asian Development Bank to back proposals for an Asia-specific network of bond clearing and settlement systems, as a means to enhance the appeal of the region's financial markets to domestic and overseas investors.

A robust bond market is seen as pivotal to the region's enormous investment demand.

Projections by the ADB show Asia needs US\$290bn a year to fund infrastructure needs, or more than \$1,000bn to the year 2000. A big shortfall exists between this and available funds, despite the region's high savings rate of over 30 per cent and substantial official reserves, estimated at \$600bn or 40 per cent of world total.

At the 29th annual meeting of the board of governors of the ADB in Asia, Mr Joseph Yam, the Hong Kong Monetary Authority's chief executive, drew a parallel with Euroclear, set up to facilitate book-entry clearing and settlement of eurodollar bond transactions, helping to spur the eurodollar bond market in 1988.

"An AsiaClear system to clear Asian and international bonds in the Asian time zone with reduced settlement risk is now a distinct possibility," he said. "Payment systems could

similarly be linked as a network, hopefully on real time. Asian financial markets would become a lot more attractive to investors in and outside this region."

The Asian bond markets are reckoned at \$338bn, or 2 per cent of comparable OECD bond markets. Efforts to stimulate the market have taken various forms: banks sought to create a "dragon bond" market, but this Asian-originated and distributed paper largely ended up with central banks. Governments such as Hong Kong have sought to develop benchmarks and install debt securities clearing systems.

While the idea of a regional bond clearing system has been mooted in the past, it was initially seen as a centralised system; fears of bureaucratic and commercial hurdles meant it never gained ground.

Now, Mr Yam said, domestic bond clearing systems and telecommunications technology have developed to a point where Asia can have its own regional system rather than a centralised one.

An AsiaClear system would make resource mobilisation through financial intermediation more effective, he said. "The ADB, as the region's premier financial institution and bond issuer, should explore and support the development of AsiaClear and other financial infrastructural networks."

tant to raise their share to cover the shortfall and without an accord by donors to replenish its coffers, the ADF looks likely to run dry this year.

The US, which is in arrears of \$337m to the ADF fund of \$4.2bn agreed in 1992, rebuffed the demands of China and India, saying the funds should be directed to smaller economies such as Cambodia.

"I do not believe China and India should participate in the ADF," Mr Jeffrey Shafer, US Treasury under-secretary, said yesterday. "The US thinks the

resources of the ADF should be available to those countries that do not have the ability to tap capital markets."

But China and India, which are both entitled to the World Bank's soft-loan funding through the International Development Association, said their exclusion was unwarranted.

US reluctance to honour its debts to the ADF, owing mainly to congressional opposition to foreign aid spending, had led to the exclusion of China and India, diplomats said. "We call on the interna-

tional community and the ADB to back our efforts in poverty alleviation, by making ADF resources available to China," Mr Yin Jieyan, head of the Chinese delegation, said.

The US delegation yesterday failed to produce specific pledges on the clearing of its arrears to the ADF before the fund runs out at the end of this year. Other donors, notably leading European countries, said they would not contribute to ADF replenishment before the US paid its debts.

Mr Shafer said the ADB should direct money from net earnings on its market-based loans to boost the next ADF.

Thai inflation rate fall eases fears on economy

By Ted Bardacke

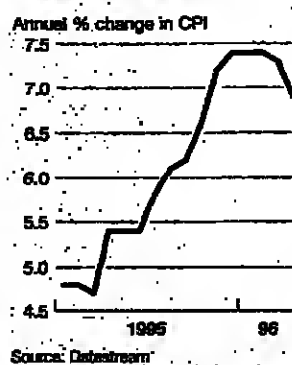
Thailand's inflation rate has registered its first steep decline in more than a year, with consumer prices in April just 6.9 per cent higher than a year earlier, the Ministry of Commerce said yesterday.

Until April's decline in the inflation rate, Thai consumer prices had risen at an annual rate of more than 7 per cent for four straight months. This has fuelled worries that the government's attempts to slow the economy were failing and forcing the central bank to keep interest rates high.

The decline in the inflation rate reinforces other indicators showing a cooling of the economy - private investment, manufacturing activity and commercial credit growth have all declined throughout 1996.

However, analysts do not expect an interest rate cut

Thailand inflation



until the latter half of the year, as the central bank is likely to wait for several months of decline before making a potentially expansionary move.

April's inflation rate is still significantly higher than the central bank's overall annual target of 4.9 per cent for 1996.

Last month's decline in inflation was led by falling prices for fresh fruit and vegetables, indicating that the effects of last year's record flooding throughout the country may finally be receding.

The rate of wholesale price rises fell further - up 6.2 per cent in April from the same month last year, compared with annual rates of 6.7 per cent in March and 7.2 per cent a year ago.

Yet as fears recede on the cost side, new concerns are emerging on the demand side.

Thai labour unions used yesterday's May Day holiday to submit demands for a 15 per cent increase in the minimum wage, which now stands at Bt145 (\$5.70), up from Bt135 last year. A committee made up of representatives of government, labour and employers will decide on the amount of the rise by the end of June.

Sri Lanka growth at 5.5%

By Anil Jayasinghe in Colombo

Foreign investor interest in Sri Lanka fell sharply last year because of the Mexican crisis and the domestic drag of the Tamil separatist war, but buoyant export demand still allowed the economy to grow by 5.5 per cent, the Central Bank said yesterday.

In a preliminary review of the economy, the bank said the country needed to attract more foreign and local private capital. The government's privatisation programme should be accelerated in a bid to achieve non-inflationary growth.

"There is an urgent need to increase the rate of capital formation, without which the country could weaken its past achievements in human development," the bank said.

Estimated GDP growth rate was marginally lower than the 5.6 per cent achieved in 1994, but per capita income rose from \$666 to \$713 last year, giving Sri Lanka the highest living standard in South Asia.

The bank said the country's moderate growth was led by exports, which benefited from a 7.5 per cent depreciation of the Sri Lankan rupee against the US dollar and favourable prices for the country's main export commodity, tea.

The budget deficit was 8.4 per cent of GDP against 10 per cent in 1994; the balance of payments current account deficit narrowed to 4.2 per cent of GDP from 6.5 per cent. The figures were better than forecast by private analysts, but the 11.5 per cent inflation rate at the end of 1995 was worse than the projected 7.7 per cent.

ASIA-PACIFIC NEWS DIGEST

China police halt May Day protest

Chinese police broke up an International Labour Day demonstration yesterday and detained several people after Beijing vendors protested at alleged seizure of their goods. More than 12 police grabbed protesters and pushed onlookers away from the demonstration outside a market in east Beijing. Stallholders said more than 100 vendors had been demonstrating outside the market and at government and police offices elsewhere in the capital.

Over 150 clothes vendors had had all their stock seized, and had been locked out since. Vendors blamed the market's management for the seizure. Appeals to police had met with no response. "Today is Labour Day. They are very angry and they need jobs," another protester said. The stallholders said they had invested their savings to build the Baiyun Clothing Wholesale Market, expecting to keep stalls there for 12 years, but had been told to leave after only one. Unauthorised demonstrations are illegal in China, and police usually clamp down quickly on any signs of labour unrest.

Food warning for Asian nations

Asia, already home to over 500m malnourished people, will have a harder time finding food as many countries focus on industrial growth instead of agriculture, non-governmental groups said yesterday. At a two-day meeting to draft a regional platform ahead of the World Food Summit in November, Mr Ghanshyam Khanna, regional representative for the UN Food and Agriculture Organisation, said that while global agricultural output was keeping up with population growth, the distribution was not equal; poorer countries were not receiving their share.

"The FAO projects that through 2010 food production will grow but at a much slower pace. The food security situation will be more fragile than before. Many self-sufficient countries will become food importers. As lower-income nations are forced to buy more food from abroad, they will have a harder time paying food bills."

Indian state governor quits

Mr Shiv Shankar, governor of the south Indian state of Kerala, resigned yesterday, following allegations of corruption against him by India's top government lawyer. Mr Dipankar Gupta, solicitor-general, told the Supreme Court charges were ready to be laid against Mr Shankar and Mr Motla Vora, governor of Uttar Pradesh, both senior members of Prime Minister P V Narasimha Rao's Congress Party, the Press Trust of India (PTI) reported.

"Investigations against both these persons are complete and the only impediment in proceeding further to file substantial charge sheets against them is the immunity enjoyed by them under Article 361 of the Constitution," Mr Gupta said.

Mr Shankar faxed his resignation to President Shankar Dayal Sharma saying he was innocent and would fight to clear his name, PTI said. Mr Vora said in Lucknow he was not aware of any moves against him in Delhi. India is in the midst of general elections. Mr Vora and Mr Shankar were both appointed to their positions by Mr Rao.

HK talks tough to Beijing

The British colonial administration in Hong Kong will refuse to co-operate with a legislature Beijing plans to install in the territory, Ms Anson Chan, the island's chief secretary, said yesterday. She had told China's top official on Hong Kong affairs that the administration would not help the provisional appointed legislature Beijing wants to install when the territory reverts to Chinese sovereignty in July 1997.

"The clear and consistent position of the Hong Kong and British governments is that such a body is neither necessary nor desirable," Mrs Chan told the Hong Kong Legislative Council, which Beijing has promised to scrap. The British side maintains Hong Kong lawmakers elected last September should serve their full four-year term until 1999. But Beijing has refused.

Seoul fights burden of bad loans

S Korea wishes to avoid a Japan-style bank crisis, writes John Burton

South Korea is viewing with alarm the banking crisis in Japan, fearing its own banking system may be engulfed by similar troubles.

Seoul now appears set on cleaning up the balance sheets of the nation's 25 commercial banks as Korea prepares to join the Organisation for Economic Co-operation and Development this year.

Failure to do so could threaten the stability of the banking industry when it faces increased competition due to the wider market access under OECD guidelines.

In the past week, Seoul has introduced measures to rescue the banks from years of poor earnings and the burden of bad loans. The new banking policy includes easing restrictions on bank loans to the big industrial groups or *chaebol*. The bank credit limits were meant to curb the economic dominance of the *chaebol*, but instead it left banks with a growing dependence on the risky small business sector, which is suffering a record number of bankruptcies.

The government also cut the reserve requirement ratio, which is the average proportion of total deposits banks must place as reserves with the central bank, in an effort to boost bank profits.

This followed a 18 per cent fall in combined net earnings to Won96bn (\$1.28bn) last year as the sluggish performance of the Seoul houses led to a sharp drop in securities-trading gains, which had become a main source of income for the banks.

Some of the country's leading banks would have gone into the red last year if the government had not decided to reduce their required reserves for stock investment losses to 30 per cent from 100 per cent.

Such accounting tricks, however, can not disguise the fundamental structural weaknesses of the banking system.

The main problem is the large amount of bad industrial loans that the banks have accumulated in the last decade. They were forced by the government to provide low-inter-

South Korean banks: cleaning up the balance sheet



The president of South Korea's largest commercial bank has been arrested for allegedly accepting kickbacks in return for providing loans to an ailing construction company, writes John Burton.

The case illustrates how strict government restrictions on bank lending have resulted in companies bribing bank officials to obtain credit. Mr Rhee Chul-so, the president of Korea First Bank, was arrested early yesterday morning for allegedly receiving Won250m in bribes

for providing Won113bn in loans to the Hyosan construction group in 1993 and 1994. Hyosan had been unable to obtain bank loans for the construction of tourist facilities because of a law banning credit for such projects unless they are located in government-designated tourist areas.

Prosecutors alleged that Mr Chung Jang-sun, the Hyosan chairman, paid Mr Rhee to acquire capital for the construction of a ski resort and condominiums and the purchase of two hotels.

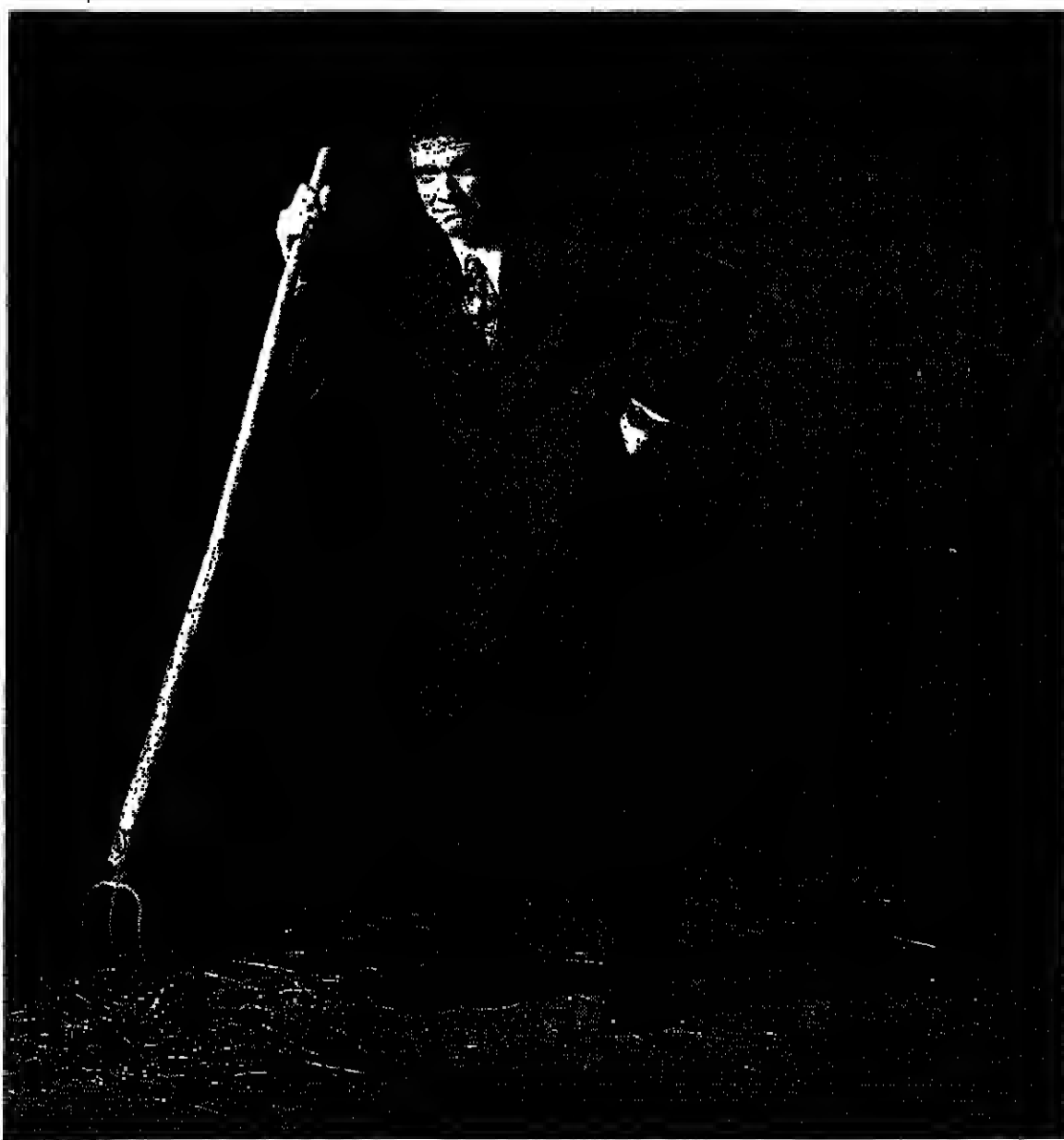
In addition, the central bank is phasing out low-interest policy loans to commercial banks that enabled them to reap healthy interest margins when lending to small businesses.

The banks are hoping that lower interest rates will result in higher loan volumes that will guarantee continued growth in interest income, up 28 per cent last year.

The next likely stage in the government's programme to rehabilitate the banking sector is to encourage mergers that would lead to cuts in their bloated workforce and improve their mainly inefficient operations.

Mr Rha Woong-bee, the deputy prime minister for economic affairs, revealed this week that the government will soon propose tax incentives and other financial aid to encourage such mergers.

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Public pressure forces out Copps over pledge on Goods and Services Tax

Deputy PM of Canada resigns post

By Bernard Simon in Toronto

Ms Sheila Copps, Canada's deputy prime minister, resigned her cabinet post and parliamentary seat yesterday after a week of unrelenting public pressure to honour an election pledge to quit if the government failed to replace the Goods and Services Tax.

The 7 per cent GST was introduced by the former Progressive Conservative government in January 1991 as part of wide-ranging tax reforms.

While it was generally welcomed by the business community, the GST has turned out to be a headache for politicians of all stripes.

Consumers' dislike of the GST, which replaced a less visible manufacturers sales tax, contributed to the downfall of the Conservatives in the 1993 poll.

The Liberals' election manifesto included a pledge to replace the GST with a "fairer" tax.

Ms Copps, who is also the heritage minister in charge of cultural policy, vowed in the run-up to the 1993 general election that she would resign if her party failed to replace the unpopular value added tax.

However, numerous efforts to find an alternative have proved fruitless.

Mr Paul Martin, finance minister, finally acknowledged last week that, after examining at least 20 other options, the government made a mistake "in thinking we could bring in a completely different tax within a reasonable time period".

Ms Copps, who has a reputation for being outspoken, initially resisted calls to stick to her promise to resign.

She said last week that "when you're on the campaign trail, you get excited and sometimes you shoot from the hip".

However, her excuses only fuelled public protests. The Globe and Mail newspaper reprinted her quotes every day this week on its editorial page under the headline "Resign".

Ms Copps said yesterday that she would contest the forthcoming by-election in her southern Ontario constituency.

Another Liberal MP was ejected from the party caucus last week after voting against the federal budget on the grounds that it failed to take action on the GST.

Faced with the difficulty of replacing the GST, the government has prodded the 10 provinces to blend their disparate sales taxes with it to create a uniform nationwide 15 per cent levy.

Quebec has already harmonised its sales tax with the GST, and Mr Martin announced last week that three small Atlantic provinces would come into the fold next year. The government has agreed to pay the three Atlantic provinces (US\$734m) over the next four years to compensate for lost revenues as they align their sales tax systems with the GST.

But most other provinces remain wary of being tarred with the GST brush.

While the furor over Ms Copps' promise has embarrassed the Liberals, her resignation is likely to contain the political damage to prime minister Jean Chrétien. Ms Copps' influence on overall government policy has been limited, despite her senior position in the cabinet.

However, the government's climbdown over the GST is an indication that the second half of the Liberals' five-year mandate is likely to be more turbulent than their first two years in office.

Mr Chrétien also faces other difficult issues, notably Quebec separatism.

Mexico's workers march out of step

May Day shows up divide between party and unions, writes Leslie Crawford

Tens of thousands of rebel trade unionists staged their traditional May Day parade yesterday - in defiance of Mexico's pro-government labour leadership, heralding a split in the Confederation of Mexican Workers (CTM) which has sustained Mexico's ruling party for six decades.

University lecturers and electricians, telephone workers and civil servants, pilots and bus drivers, marched past the empty balcony of the 18th century National Palace, where over a ceremony that reaffirmed the labour movement's unwavering loyalty to the Institutional Revolutionary Party (PRI).

That loyalty is gone, shattered by the country's economic crisis and a labour leadership discredited by its close ties to the government.

For the second year in a row, Mr Fidel Velazquez, the 86-year-old patriarch who has led the CTM for more than half a century, decreed that the official labour movement would not march on May 1. Wishing to spare President Ernesto Zedillo the full blast of labour discontent, Mr Velazquez chose to stage a smaller, well-behaved event indoors, in which he and Mr Zedillo repeated the tired slogans of the 1910 Mexican Revolution.

There were no May Day marches last year, as most labour unions, reeling from the shock of the devaluation of the peso, chose to rally around "Don Fidel", as the Mexican patriarch is respectfully known.

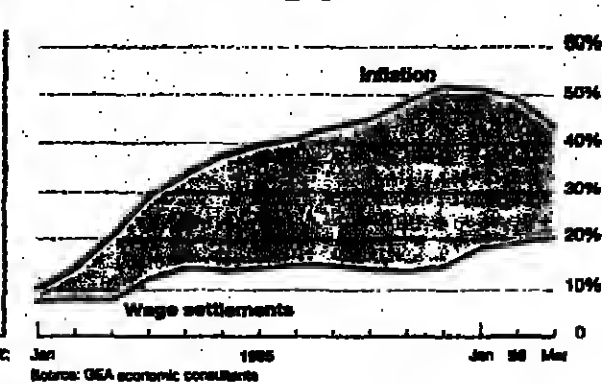
May Day celebrations in Chile yesterday were overshadowed by a dispute between the Socialist and Christian Democrat contenders for the leadership of the CUT union confederation.

The Christian Democrats lost the presidency of the CUT executive committee last week after holding it for more than a decade, even though

At work in Mexico: the wage/inflation gap



Patriarchal union leader Fidel Velazquez speaking to staged the president



This year, however, Mexico's largest trade unions have broken away from the CTM fold. With the recession continuing to bite into jobs and real wages, with pay settlements averaging only half the rate of inflation, the rebel unions believe it is time to end the labour movement's historic allegiance to the government.

The rebel unionists, led by

New Trade Unionism", which was joined by electricians, pilots, teachers, transport workers, social security unions, bank employees and some car industry unions.

The Forum wants a new Labour Code to emancipate Mexico's labour movement from the tutelary authority of government. At present, all union elections must be

shop. It wants to clean out corruption within its own unions, and abolish the ties of patronage which bond union bosses to the PRI government. Loyal labour leaders are often rewarded with governorships, senate seats and lucrative government posts. And in the state sector, they grow rich by auctioning jobs and running their own private businesses.

With the recession continuing to bite into jobs and real wages, rebel unions believe it is time to end the labour movement's historic allegiance to the government

Mr Francisco Hernández Juárez, the telephone workers' leader, have been threatened with expulsion from the Labour Congress, an umbrella group which unites the CTM and smaller pro-government labour federations. Earlier this year, Mr Hernández Juárez launched the "Forum for a

ended by the labour ministry, while "independent" trade unions find it almost impossible to obtain official registration. The government also has the power to declare whether strikes are legal or not.

The Forum advocates freedom of association, against the present practice of the closed

which are allowed to bid for public contracts.

"Mexico's labour movement was designed for a country which no longer exists," says Mr Hernández Juárez. "It is too subservient [to government], and too reliant on corporatist structures. We have to change with the rest of the country."

His decision to lead the May Day parade represents a de facto split within the Labour Congress, even if no formal expulsions take place. And although Mr Hernández Juárez denies it, it is only a question of time before he takes his followers into a new confederation that will rival the CTM.

A period of labour strife is expected to follow.

The most immediate consequence of a split in the labour movement will be a wave of strike action, as rival labour leaders wrestle for power," predicts Mr Juan Millán, a CTM leader who was appointed secretary-general of the PRI last year.

The split worries the government, which has relied on Don Fidel to keep a lid on labour unrest in times of crisis.

But Don Fidel's influence, has waned with his ailing health. He has lost two important political battles this year. He failed to persuade the government to index wages to inflation, or to prevent price increases in basic foodstuffs. In April, when the minimum wage was raised by 12 per cent to 22 pesos (\$2.90) a day, government-controlled prices for milk and maize tortillas were increased by 30 and 27 per cent respectively.

Don Fidel's refusal to designate an heir-apparent has compounded the disarray in the labour movement. He is only due to step down in 1998, when his current six-year term expires. But his frequent hospitalisations have led many to believe he will die in office.

His departure one way or the other will create a vacuum in

the political system. "Don Fidel's immense moral authority has kept the labour movement together," Mr Millán says. "He is a phenomenon that will not be repeated."

Neither are there clear rules to choose Don Fidel's successor, a factor which will intensify the struggle for control over the CTM and its 5m members.

In theory, three deputies, aged 88, 77 and 61, stand in the line of succession, but they form part of the gerontocracy which is destined to expire with Don Fidel.

Mr Millán, who is considered the CTM's chief ideologist and is 53, says he is "too young" to be considered for the job.

The government is expected to play a mediating role in the succession, in the hope of perpetuating traditional arrangements.

There are signs, however, that some unions are not prepared to be as docile as in the past. The teachers' union is threatening to strike in May, while a partial stoppage of road haulage operators, who transport 80 per cent of Mexico's internal trade and almost all overland exports to the US, began on Monday.

Elsewhere, the vociferous union of petrochemical workers is standing in the way of the privatisation of state-owned petrochemical plants, writing angry letters to every embassy in Mexico City to warn off foreign investors. Without the co-operation of Mexico's labour movement, the task of introducing further economic reforms will be more of an uphill struggle for the government.

Chile union confederation leadership row flares

By Imogen Mark in Santiago

May Day celebrations in Chile yesterday were overshadowed by a dispute between the Socialist and Christian Democrat contenders for the leadership of the CUT union confederation.

The Christian Democrats lost the presidency of the CUT executive committee last week after holding it for more than a decade, even though

their candidate, Ms María Rozas, won the largest number of delegates in the elections in mid-April.

Mr Roberto Alarcón, the Socialist candidate, was elected instead with the support of Communist party delegates.

Ms Rozas and the other Christian Democrat unionists are now refusing to take part in the new executive unless there is an agreement at least to share the presidency.

The outright winners in the new CUT are the Communists, who saw their share of the vote increase by almost 50 per cent to bring them in third with 13 seats, after the Socialists, with 15 seats, and the Christian Democrats with 16.

The Communists, who are outside the government coalition in which Christian Democrats and Socialists are the main partners, have been gaining strength in the unions in the

past couple of years at the expense of the government parties.

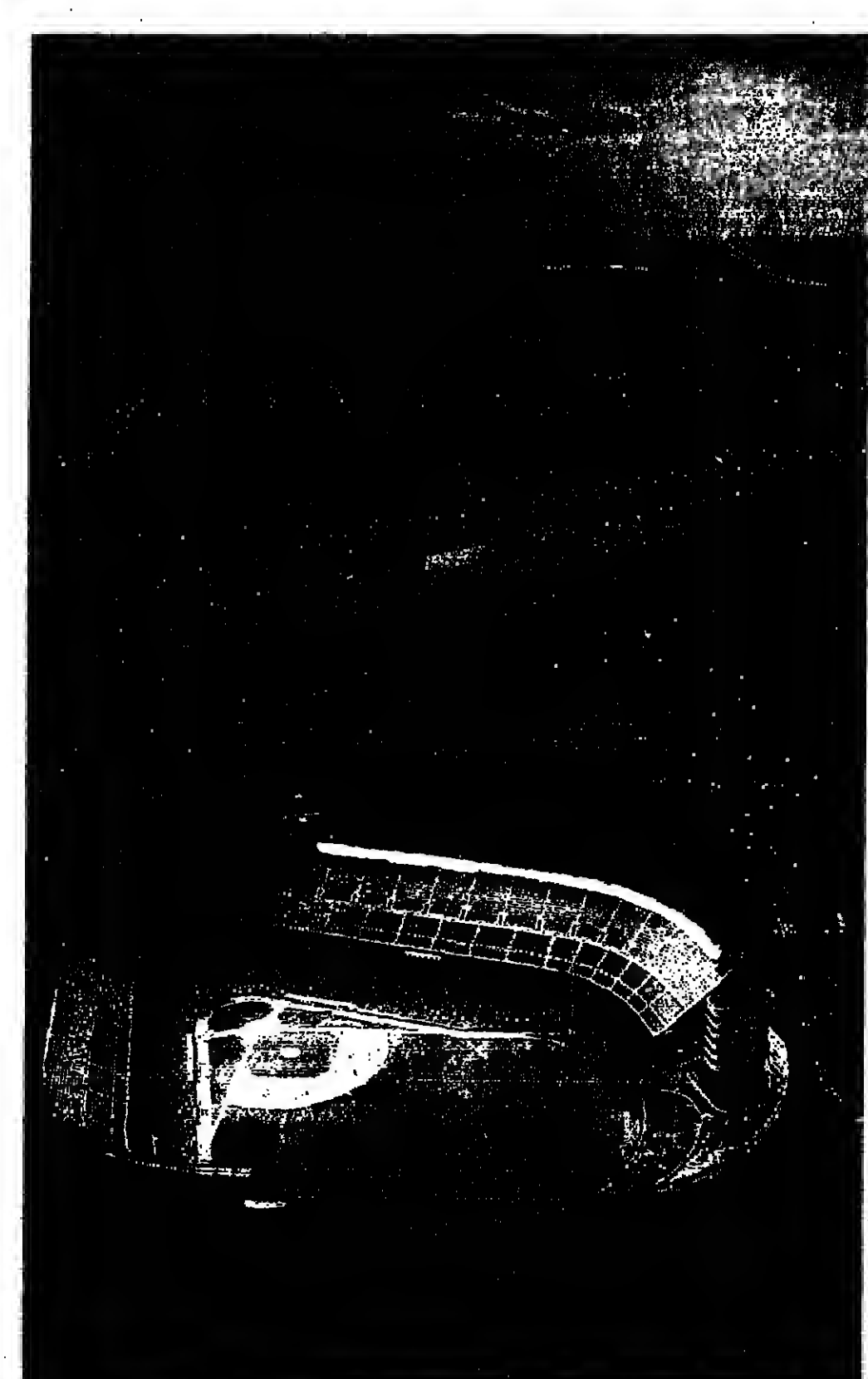
They now control the two biggest unions, the teachers and the public health workers, who are the mainstay of the CUT.

For the government, it will mean a tougher relationship with a more hostile labour organisation.

The CUT represents only about half the unionised workforce, which in turn is only 15 per cent of the 5m

workforce. However, it has a symbolic importance as a spokesman for the labour movement which the government until now has helped to maintain.

However, a sign of the new relationship came this week when the government announced it would not be consulting with the CUT, as it has always done before, on the annual increase of the minimum wage.



Can you light up the sky without clouding the air?

Natural gas - affordable, safe and available - is an increasingly popular choice for driving turbines that generate electrical power all over the world. Although it burns relatively cleanly, combustion does produce nitrogen oxide, implicated in acid rain. Abatement techniques have reduced emissions, but heightened awareness among the industrial nations continues to generate tighter legislative controls and the development of ecologically-sound power plants.

Conventional methods of controlling emissions are costly and dampen efficiency. However, ABB research has now developed a way to burn them off. It is a total solution, reducing pollutants while maintaining efficiency, thus consuming less fossil fuel. ABB has installed its innovative "EV-burner" in the Midland Cogeneration Venture, a joint project to produce power for the Dow Chemical Company and the State of Michigan, USA. At full power load, this plant is now producing emission levels well below the world's most stringent requirements.

As a leader in electrical engineering for industry and transportation, and in the generation, transmission and distribution of power, ABB is committed to industrial and ecological efficiency worldwide. We transfer know-how across borders with ease. But in each country, ABB operations are local and flexible. That means we can help our customers respond swiftly and surely to technological challenges which stretch the limits of the possible. Like burning gas without clouding the sky.

Yes, you can.



Air force to withdraw from Germany

By Bernard Gray, Defence Correspondent

The Royal Air Force is to leave Germany, ending a presence on the mainland of Europe which has lasted since the end of the second world war. The withdrawal marks a further decline in the level of foreign forces in Germany and another stage in the transformation of Nato from central European cold war warrior to mobile crisis reaction force.

Under the plan, announced in the annual UK defence white paper yesterday, the last British air base in Germany, RAF Bruggen, will close in 2002. Its four Tornados GR1 strike fighter squadrons will move to bases in Britain.

The last British presence in Germany will be provided by the army which has 24,000 troops in one armoured division and an artillery brigade.

Mr Michael Portillo, the defence secretary, insisted that the RAF's departure was not a lessening of Britain's commitment to Nato, and that the same aircraft would be available from Britain for Nato operations.

However, he said that Britain had to react to the

changed strategic circumstances, and that basing the aircraft in the UK would produce savings estimated at £25m (\$37.76m) a year.

Mr Portillo added that the RAF has had problems training in Germany since the fall of the Berlin Wall in 1990. Many curtailed low flying, which meant that the RAF Tornados stationed there had to cross the North Sea to Scotland to train.

At its peak in 1985 Britain had 12,000 RAF personnel in Germany on four bases with over 120 combat aircraft. Britain's total presence in

Germany will have fallen from a peak of 71,000 a decade ago to just more than 20,000 by the turn of the century. This mirrors the withdrawal of other Nato forces with the US cutting its troop numbers from 300,000 to under 100,000 over the same period.

Nato planners say that with Russia no longer a threat, Nato must adapt to respond to more varied crises such as the invasion of Kuwait and the war in Bosnia. It has established a Rapid Reaction Corps, run by the UK, which was, for example, given the job of running the ground forces in Bosnia.

Nato is also working on the idea of Combined Joint Task Forces, which would allow some Nato members to use alliance equipment without all of Nato's members becoming involved.

The cold war organisation is evolving in other ways too. France is moving closer to rejoining the Nato military structure, and many central and eastern European countries wish to join the alliance.

Any expansion of Nato is likely to change the nature of the alliance further and mean that it will have to be increasingly flexible if it is to survive.

Picture of stagnating industry grows

By Graham Bowley, Economics Staff

Britain's manufacturers yesterday reported the first fall in factory output for 24 months last month as companies suffered the biggest decline in new orders since September 1992.

The latest survey of industry by the Chartered Institute of Purchasing & Supply added to the gloom surrounding British manufacturing, prompting further speculation in the City of London that interest rates might fall again soon.

However, on the foreign exchanges, the pound fell to a two-year low against the dollar, due mainly to anxiety ahead of today's local elections in which the government is expected to suffer heavy losses. The pound closed in London at \$1.497 against the dollar and at DM2.265 against the D-Mark.

Analysts believe the chancellor of the exchequer will now be under intense pressure to cut interest rates to engineer faster growth and restore the government's standing in the opinion polls.

The institute's measure of price pressures fell to the lowest level since the survey began in 1991 as manufacturers cut prices for the sixth consecutive month.

Mr Alex Garrard, UK economist at UBS, said: "The chancellor now has plenty of ammunition to push for a further rate cut, with widespread losses expected in the local elections fuelling backbench pressure on the chancellor to deliver." One glimmer of light was provided by demand for consumer goods, which remained buoyant - causing a rise in output in the consumer goods sector.

But this was more than offset by declines in orders for investment and intermediate goods in both the home market and those outside the UK.

This was another stark illustration of the widening gulf between the consumer side of the economy, where activity appears to be strengthening, and industry, which seems to be stagnating.

Separate figures yesterday from the Bank of England provided more evidence of rising consumer demand. Net consumer borrowing grew by a seasonally adjusted £700m (£1.01bn) in March - more than the City had expected and consistent with steady growth in consumer demand.

The institute's overall index of manufacturing activity - which collates data on stocks, employment, output, delivery times and orders from purchasing managers at 310 companies across the UK - was a seasonally adjusted 49.3 last month compared with 49.4 in March. A reading below 50 indicates a contraction in activity.

This was the third month in a row that activity has declined. Mr Peter Thomson, the institute's director-general, said there had now been no growth in manufacturing for nine months.

He said he was "encouraged" by the pick up in the consumer sector but that the government would now find it "very difficult" to defend its upbeat growth forecasts for this year.

The buoyancy of the consumer sector meant factories took on more staff for the first time in four months although companies making intermediate and investment goods continued to shed jobs.

Euro '96 ticket sales shortfall

Almost a quarter of the tickets for Euro 96, the European Championship football tournament have yet to be sold, just over a month before the competition starts.

The championship, to be held in eight English cities in June, is the biggest sporting event in the UK since the 1966 World Cup in 1966. But interest is so low that tickets are still available for the quarter and semi final games at Wembley, and for Italy's three group games. The executive said that between 1m and 1.1m tickets have been sold from a total of nearly 1.4m.

The shortfall has occurred partly because English football fans are busy following the battle for the domestic league title.

Also, many of the 16 participating teams are bringing few fans and will attract few locals. None of the five eastern European sides - Croatia, Russia, Bulgaria, the Czech Republic and Romania - have taken up their quota of 7,000 tickets per match. "That was expected," the FA said. Croatia has taken just 2,000 tickets in total for its three group matches.

Denmark, with 12,000 tickets per match, and Turkey, with 11,000, have exceeded their quotas, taking more than soccer giants Italy and Germany. The FA also let Switzerland exceed its quota.

Simon Kuper, London

Minister urges US to open defence markets

By Bernard Gray, Defence Correspondent

Mr Michael Portillo, the defence secretary, urged the US to open its markets to European defence equipment if Britain was to continue to resist continental calls for US equipment to be excluded from Europe.

Introducing the annual defence white paper Mr Portillo emphasised the amount of equipment Britain had bought from the US in the past two years. The UK has spent £2.5bn (\$3.8bn) on 67 Apache tank-busting helicopters, almost £1bn on 35 C-130J Hercules transport aircraft, and has bought 14 Chinook heavy-lift transport helicopters, Tomahawk cruise missiles and Paveway III laser guided bombs, all from the US.

If the UK was to continue to

allow the US equal access to defence equipment competitors in future, the Pentagon must "operate a two-way street", insisted Mr Portillo.

The UK is pressing the US to buy the BAe-Hughes Asraam short range air-to-air missile, the GEC-Marconi Tiald aircraft-mounted laser bomb aimer, the Shorts StarStreak high-velocity missile and field guns from Royal Ordnance or VSEL.

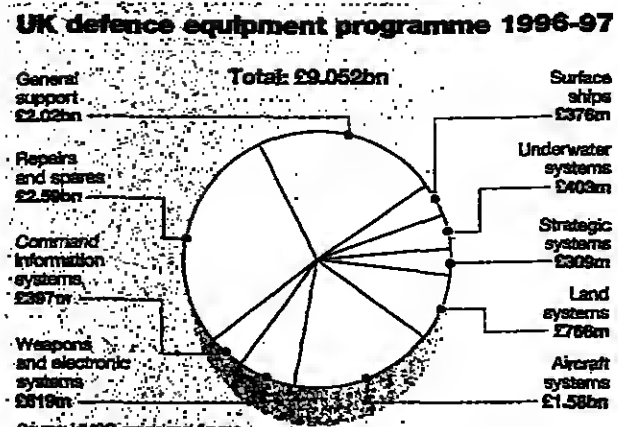
Mr Paul Kaminski, the Pentagon undersecretary for acquisition, has commissioned studies to determine which European programmes the US might consider.

However, Mr James Arbuthnot, the UK procurement minister, dismissed the idea that such warnings meant that the UK would automatically buy European or British in its procurement competitions. "We

are interested in the best equipment for our forces at the best value for money, and we will make our decisions on the basis of all the factors, of which industrial concerns is one component," he said.

All of those competitions seem to remain on course, according to the white paper published yesterday and most have strong US as well as European contenders.

Mr Arbuthnot confirmed that the MOD was likely to decide on a £2.6m replacement for the Nimrod maritime patrol aircraft by the summer. Two programmes for £650m of air-launched cruise missiles and £700m of air-launched anti-tank missiles are also likely to be decided before parliament rises in July. A third programme for £800m of long range missiles for the Eurofighter is likely to be decided early next year.



Mr Portillo stressed that co-operation with other European countries was increasing. Difficulties between Britain and Germany over the share of work on the four-nation £25bn Eurofighter project have been resolved, and the MOD expects to place contracts for the Eurofighter production tooling shortly. The UK has also teamed with France and Italy to develop a new air-defence frigate in a programme worth about £7m. Agreement for the UK to work with France and Germany on a new "hedgehog" would lead to the UK joining the nascent Franco-German arms agency.

However, the white paper said that the UK was working towards rejoining the programme for the Future Large Aircraft European transporter, but with continental commitment weakening, no date had been set.

Share price expectation for Railtrack announced

By Charles Batchelor, Transport Correspondent

While Mr Robert Horton, the chairman of Railtrack, was in Boston yesterday drumming up interest among US institutions for the company's sale on May 20, the government announced that it expected the company to float on the stock market for between £1.75bn (\$2.64bn) and £1.95bn.

Shares in the company, which has taken over British Rail's track, stations and signalling systems, were yesterday priced at between 340p and 380p for UK investors, roughly in line with expectations. Large institutions and international investors will be required to pay an additional 10p per share. But the final price, which will depend on

the amount of investor interest, will not be decided until just before the listing of the company's shares on the London stock market.

The government opted for a cautious valuation of the company's shares in spite of a last-minute flood of registrations from private UK investors keen to qualify for the substantial discounts and bonuses which are on offer. A total of 1.9m small investors have registered with a "share shop".

City of London analysts said the valuation range announced by Sir George Young, transport secretary, represented fair value for a privatisation which has aroused such criticism from the opposition political parties and the public at large. But the pricing was described as "a cynical misuse of national resources," by Ms Clare Short, the opposition Labour party's transport spokeswoman.

Mr David Myrddin-Evans, an analyst at Etfarwest Benson Securities, said: "The share has been heavily discounted because of political worries... the valuation is in line with the City's expectations although the yield is at the top end for the utilities sector."

Setting the Railtrack price range marks another step towards completing the controversial sell-off of British Rail. Railtrack will issue 500m shares although up to 65m will be held back to allow stock market fluctuations to be smoothed out in the first month of trading.

Increased economic uncertainty prompted chemical companies to delay up to a fifth of their investment in the UK last year, but most intend to catch up this year, triggering a 14 per cent increase in capital spending to £2.35bn (\$3.54bn).

Most of the increase will go into bulk chemical production in the north-east, where the Department of Trade and Industry is promoting Teesside as Europe's largest petrochemicals zone, in competition with the current leader, Rotterdam.

The Teesside initiative has prompted nearly £500m of investment announcements since its launch last year. Most of these will be expansions of existing plants, including a

Investment in chemicals delayed

By Jenny Luesby in London

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The Teesside initiative has prompted nearly £500m of investment announcements since its launch last year. Most of these will be expansions of existing plants, including a

£200m investment by DuPont and £155m by Imperial Chemical Industries. For the chemical industry as a whole, UK investment rose by 2.5 per cent last year, to £2.95bn. This was the first rise since 1991.

But companies surveyed by the Chemicals Industries Association - responsible for more than half the investment - expected to invest 20 per cent more in the UK than in 1994, but invested 2.5 per cent less.

They blamed industry restructuring - which has seen many companies in the sector change ownership - and increased economic uncertainty for this shortfall, which is far greater than normal.

However, they expected authorisations for future investment in the UK to jump by 17 per cent this year.

MPs are accused of 'childish xenophobia'

By John Karpfner at Westminster

A concerted campaign to defend the prime minister's approach to Europe and his leadership style intensified yesterday with an attack by Mr Malcolm Rifkind, foreign secretary, on the "childish xenophobia" of some in the governing Conservative party.

Mr Rifkind's intervention, which came a day after an endorsement of the European ideal by Mr Michael Heseltine, the deputy prime minister, was

seen as an attempt to counter the calls for retribution against the European Union over the beef crisis.

The government's inability to secure a lifting of the ban on UK beef led to a renewed bout of anti-European fever in the House of Commons, as several Tory MPs continued to fuel speculation about Mr John Major's hold on power.

But both Mr Heseltine and Mr John Redwood, the former Welsh secretary who contested the leadership last year, gave categorical statements that

they were fully committed to fighting the general election under Mr Major.

Mr Rifkind, who like Mr Major has in recent months made limited gestures to Eurosceptics, called for an end to the European debate being "conducted at the extreme". Britain, he suggested, could be among a majority of member states not to join a single currency if it came into being in 1999.

The concept of the EU as a tightly-knit group of countries all submitting to the same

degree of integration and supra-national authority is unsustainable for the foreseeable future," Mr Rifkind told the European Policy Forum.

Meanwhile Mr Kenneth Clarke, the chancellor, said yesterday in evidence to the Treasury select committee, that opponents of a single European currency had tried to build the idea up into a "grand political project" for their own purposes.

Mr Clarke struck scrupulously to the government's agreed policy on the single cur-

rency saying it was too early to decide whether Britain should join and that he was content with the idea of a referendum.

But the chancellor left no doubt that he was sympathetic to the idea of European monetary union. While conceding that opponents of a single currency were not isolationist in intent, he said they might be "isolationist in consequence".

Whether the UK joined or not, Britain should aim to be in the "premier league" of countries that were eligible to do so, he added.

Labour pledge to HK minorities

By John Ridding in Hong Kong

A Labour government would give Hong Kong's ethnic minorities full rights of abode in Britain if they were stateless after the territory returned to China next year, Mr Robin Cook, the shadow foreign secretary said yesterday.

Mr Cook said the Conservative government's stance that members of minority groups would be given right of abode if they came under pressure to leave Hong Kong was inadequate. He estimated the numbers concerned at between 3,000 and 5,000.

On most issues relating to Hong Kong, however, Mr Cook struck a similar stand to the government. "We want to avoid making Hong Kong a partisan matter within British politics," he said, adding that this would damage Britain's interests in dealing with China.

Relations between Britain and China have come under serious strain in recent weeks because of Beijing's plan to replace the territory's elected

legislature. Mr Cook pledged that a Labour government would resist such a move. Asked whether it would take the matter to the United Nations and the International Court of Justice, the shadow foreign secretary said that all options would be available.

Mr Cook said there was little prospect that a Labour government would seek to replace Mr Chris Patten, the governor of Hong Kong, who has been strongly criticised by Beijing for implementing democratic reforms. Mr Cook said he would take "an awful lot of persuading" of the need to replace the governor.

In addition to the right of abode for ethnic minorities, Mr Cook said that he would write to Mr John Major, the British prime minister, urging him to bring forward legislation granting citizenship to war widows in Hong Kong. During a visit to Hong Kong in March, Mr Major said that this would be the subject of a private members bill. The Hong Kong government estimates there are 54 war widows in the territory.

Machine tools factory considered

By Peter Marsh in London

Amada, the Japanese company that is the world's biggest machine tool builder, is considering setting up a UK manufacturing operation.

Mr Nobuyuki Ueda, Amada's president, said the company was "studying the possibilities" of a UK plant to add to its existing European manufacturing operation in France.

Mr Ueda, interviewed in Birmingham at the machine tool business's annual exhibition, would give no further details.

Assuming Amada gave the go-ahead to a plant, it would be a further fillip for the UK machine industry, which is in buoyant mood after a bleak period in the early 1990s recession when order books and out-

put fell steeply.

If the plant went ahead it would fit in with trends in the industry of setting up factories close to main customers.

There are strong incentives for Japanese machine tool companies to set up European production operations: the strong yen, which makes exporting from Japan to Europe unattractive, and the high costs of

adopting Japanese-made machinery to meet EU safety regulations.

Industry sources said that if Amada decided on a plant, which would add to its existing sales operation in Kidderminster, western England, it would probably involve spending of at least £10m and might create "several hundred" manufacturing jobs.

Political tensions heightened by beef negotiations

By George Parker at Westminster

Mr Douglas Hogg, agriculture minister, was subjected to scarcely concealed contempt from many MPs in the governing Conservative party yesterday, when he reported to the House of Commons his latest attempts to persuade the European Union to lift the ban on British beef exports.

Euro-sceptic Tory MPs laughed mockingly when Mr Hogg insisted that his fellow EU agriculture ministers "explicitly recognise that the ban is temporary".

Mr Hogg's allies insist that he did make solid progress at the EU agriculture council in Luxembourg, but his inability to secure an early lifting of

the ban has fuelled the war raging in the Conservative party over Europe.

Mr Hogg, who is anxious to take the political heat out of the beef crisis, insisted his policy of "persuasion and negotiation" was the best way to achieve a lifting of the ban.

Consumer organisations were shocked yesterday by the government's discovery that cattle feed continues to be contaminated with sheep remains eight years after it was banned in an effort to eliminate BSE, wrote Deborah Hargreaves and Caroline Southey.

The Ministry of Agriculture revealed this week that 834 cattle

feed samples taken at mills in February and March, three were contaminated with sheep remains and five with pig material.

The use of sheep remains in feed for cattle was banned in 1988 because it was believed that scrapie - a disease in sheep similar to BSE - could be transmitted to cattle. Pig carcasses were banned from cattle feed in 1994.

He said the EU had agreed in principle to a step-by-step lifting of the ban, possibly starting with an easing of restrictions on tallow, gelatine and semen exports.

He said he would consider carefully EU suggestions of a selective slaughter policy that went wider than the

ministry official said that a test for detecting animal proteins in feed had only been developed in the past year and that feed at farms and feed mills was being regularly tested.

"We were disappointed with these findings, but those mills where it was found will now be monitored on a weekly basis," he said.

42,000 cattle he has proposed, but not much wider. "The scale of any measure finally put in place will be very much on the lines I have already indicated to the House," he said.

Tory right-wingers packed the chamber to air their anger at the continuing beef ban, and their

Higher profits forecast

Chatsert, the independent Lloyd's analyst, yesterday said it expected the insurance market to report a profit of about £1.05bn when results for 1995 are unveiled later this year under Lloyd's three-year accounting system. The figure was higher than earlier Chatsert forecasts and highlighted the turnaround in Lloyd's profitability after losses of more than £8bn reported in recent years.

Separately, insurance analysts at Hoare Govett said the recent erosion of underwriting margins had been less than feared and they were expecting global pre-tax profits of £477m for 1995 and £471m in 1996. But Christie Brockbank Sipton (CBS), a Lloyd's agency, warned marine insurers had made large cuts in premium rates and could see losses this year.

Meanwhile, CBS is close to buying Chatsert in a deal which values Chatsert at about £100,000.

By Ralph Atkins, Insurance Correspondent

Internet take-up rate steadies

The number of Internet users in the UK will rise from 1.3m at the end of 1995 to 7.7m by the end of the decade in spite of slowing subscriber growth rates, according to International Data Corporation, the high technology consultancy.

The IDC report says subscribers to be driven by the attractions of electronic mail, enhanced content on the World Wide Web and connecting internal corporate networks - intranets. Web usage is expected to be limited for some time, mainly because of capacity constraints, and IDC suggests that "the wide area network bottleneck/capacity concern in the UK is the largest inhibitor to rapid uptake of the Internet and the Web".

In spite of this IDC expects the markets for Internet and intranet-related software and services to grow rapidly, at 36 per cent and 70 per cent compound annual growth rates respectively during the next five years, albeit from a small base.

Meanwhile Unipalm Pipex, one of the leading UK-based Internet access providers, is launching an upgraded service today which will provide its personal subscribers with what it claims is the world's fastest dial-up access to the Internet using a standard telephone line.

Paul Taylor, London

Tourist numbers soar

The UK expects to welcome a record 25m visitors to its shores in 1996 after seeing a 6 per cent jump in numbers in January and February. The UK's popularity has been enhanced by sterling weakness, the opening of the Channel Tunnel and effective marketing.

There were 24.0m visitors to the UK in the twelve months to the end of February, up 12 per cent from the previous 12 months, according to National Statistics. The figure was swelled by a 9 per cent rise in American visitors, a 12 per cent increase in West European visitors, and a 12 per cent jump in visitors from the rest of the world. UK visits overseas rose 4 per cent to 42.0m in the twelve months to the end of February.

By Christopher Brown-Humes

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06 ticket shortfall

proposals floated

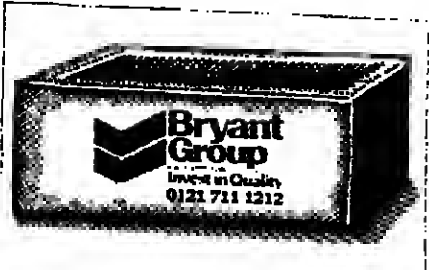
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fits forecast

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numbers soar

negotiation



IN BRIEF Motorola team calls for EC Irish probe

Persona, a consortium involving Motorola of the US, is to complain to the European Commission over the Irish government's handling of the competition for Ireland's second GSM mobile phone licence. Page 19

Nikkei retreats below 22,000 level

Tokyo's Nikkei 225 index declined 1 per cent, falling below the 22,000 level for the first time in seven trading days. The Nikkei slipped 225.29 to 21,815.01 as uncertainty over the course of the yen weighed on investor sentiment. Bargain hunting by domestic institutions provided some support for the index, but their purchases remained limited ahead of the five-day weekend starting on Friday. Page 98

The rise and fall of the AIOC empire The Russian metals business in the early 1990s offered a modern equivalent of America's wild west, and some of the most successful cowboys worked for AIOC, a New York-based commodities group. But more than any other company, the rise and fall of AIOC demonstrated the opportunities and lethal pitfalls of the Russian metals trading market. Page 18

Pacific BBA bids A\$275m for Azon Pacific BBA, the Australian manufacturing group, launched a hostile A\$275m (US\$217m) bid for Azon, the former manufacturing division of the Boral building materials group, which was floated off on the stock market three years ago. Page 21

Banco Santander to buy out partner in CCH Banco Santander, the Spanish banking group, is to pay DM300m (\$195.6m) to buy out the 50 per cent stake held by its partner, Royal Bank of Scotland, in CCH-Holding, parent company of Germany's CC-Bank consumer finance group. Page 22

BAT rises to £600m in first quarter BAT Industries of the UK reported underlying first-quarter profit growth of 10 per cent with its tobacco businesses performing slightly worse than forecast and its financial services marginally better. Pre-tax profits including an exceptional gain were up 16 per cent to £600m (\$900m). Page 23

Mergers lift Sons of Gwalia into gold index Only 14 months ago Sons of Gwalia was in production terms at least - one of the also-rans among Australian gold miners. But three quick deals since then have propelled it into fifth place among Australian gold producers and earned it a place in the Financial Times Gold Mines Index from tomorrow. Page 25

Table with 2 columns: Company Name and Share Price. Includes AIOC, Air Canada, Air New Zealand, Allianz, Ansett Airlines, Astra, Audi, Azon, BAT, BAE, Banco Santander, Bankertrust, Bariloche Timber, Bord na Mona, Bremer Vulkan, Broken Hill Prop., CC-Bank, CNA, Churchill, Cigna, Commerzbank, Cornhill Insurance, Courtauld Textiles, Crompton & Knowles, Cummins, Currency Management, DTZ Milntas, Danish Business, Deutsche Bank, Direct Line, Dominion Textile, Dredner Bank, EDS, ESS.

Market Statistics table with columns for various market indicators and their values.

Chief price changes yesterday table with columns for company names and price changes.

FINANCIAL TIMES COMPANIES & MARKETS

Thursday May 2 1996

BA scraps plan for 60 regional jets

By Michael Skapinker, Aerospace Correspondent British Airways has shelved plans to spend more than \$1bn on 60 regional jets. The purchase would have been the airline's biggest order for five years. BA said yesterday that it had to leading aircraft manufacturers to stop work on their bids for the order. The airline said: "We've decided to put the tender process on hold to give us time to evaluate our regional operations."

BA said yesterday it had decided that the planned regional jet purchase did not make economic sense. "We made it clear that to fund such a large purchase, changes would be required in our regional cost base. That's taking time to complete." Aerospace industry executives believe BA's change of mind is a result of a re-evaluation of the airline's priorities by Mr Robert Ayling, who took over as chief executive at the start of the year. BA has continued to express an interest, however, in buying a new large aircraft, capable of carrying more than 500 passengers.

Boeing hopes to begin work on a 500-seat aircraft by the end of the year. Airbus says it hopes to announce firm plans for a 650-seater by the end of 1997. When BA invited the five manufacturers to bid for the regional jet order, it said it wanted aircraft in the 80, 100 and 120-seat category to replace Boeing 737-200s on UK domestic routes and on services to continental Europe from Birmingham, Edinburgh, Glasgow and Manchester. BA also said some of the aircraft would be used by Deutsche

BA, the German carrier in which it has a 49 per cent stake. Although Deutsche BA has won passengers away from Lufthansa, Germany's main carrier, it runs at a loss. The regional aircraft order had been seen by several manufacturers as an opportunity to break Boeing's dominance as a supplier to BA. The carrier has never bought an Airbus aircraft, although its fleet contains 10 Airbus A320s which were ordered by British Caledonian before BA acquired the airline in 1987. Lex, Page 16

PepsiCo matches Coca-Cola stock split

By Richard Tomkins in New York

PepsiCo, the US snack and soft drinks group, yesterday mirrored its US rival Coca-Cola by announcing a two-for-one stock split, doubling the number of authorised shares to 3.6bn. Emphasising the rivalry between the two, PepsiCo said trading in the split stock would begin on May 13 - the same date fixed by Coca-Cola for the start of trading in its split stock. The move, announced at PepsiCo's annual meeting, follows Tuesday's publication of its first-quarter results, showing net income 23 per cent higher at \$394m. Those figures lifted PepsiCo's shares \$2 to \$63.4, and yesterday they were up another 8% at \$68.3 in early trading.

In the US, stock splits are taken as a sign that companies are confident about their growth prospects, because they suggest that continuing increases in their share prices will put the cost of even a single share out of the reach of small investors. Yesterday Mr Wayne Calloway, chairman, said: "PepsiCo's shareholders are clearly benefiting from the strength of all three of our businesses, and I'm confident our best years are still to come. The stock split will make it easier for individual investors to purchase shares."

PepsiCo also announced a 15 per cent rise in its quarterly dividend from 10 cents to 11.5 cents after the split. At the end of last year Coca-Cola announced plans for a two-for-one stock split, increasing the number of authorised shares from 2.8bn to 5.6bn. It said the split was in keeping with its tradition of keeping its share price at a level convenient for large and small investors. Two months later it announced a 14 per cent rise in its quarterly dividend to 25 cents a share, pre-split.

Coca-Cola appears to have more of a reason to split its stock than PepsiCo because its price is higher. Both companies have seen big increases in their share prices recently. In early trading yesterday, Coca-Cola's price was up from \$61.4 at the beginning of last year to \$81.1, while PepsiCo's price had risen from \$36.4 to \$63.4 over the same period. Coca-Cola's last three stock splits were a two-for-one split in 1992 and 1990 and a three-for-one split in 1986. PepsiCo had three-for-one splits in 1990, 1986 and 1977.

Stena chief dismisses idea of merging with P&O

By Hugh Carnegie in Stockholm

Mr Bo Lerenius, chief executive of Stena Line, said yesterday the Swedish ferry operator was committed to remaining an independent carrier on the English Channel and was not interested in a merger with the UK's P&O to meet tough competition from Eurotunnel. "We have no intention of doing anything else but going on our own," he said. Mr Lerenius was responding to news that P&O, the biggest ferry operator on the Channel, was set to seek permission from the Office of Fair Trading to be allowed to hold merger discussions with Stena. Ferry operators have been in a price-cutting battle with Eurotunnel, which has taken a share of more than 40 per cent of Channel traffic since it opened last year.

Ralph Atkins reports on plans to repeat a successful UK formula Aiming for a direct hit on US insurance market

Like a Hollywood star scared of being typecast, Mr Peter Wood (right) - the nearest the UK insurance industry gets to a celebrity - just wants to be free. Direct Line, the telephone-based insurer he founded 11 years ago, has transformed the private motor and household sectors - in the UK and increasingly overseas where others are mimicking his methods of selling direct to customers. Mr Wood has become a multi-millionaire. But Mr Wood has become restless. Under his recently renegotiated contract, he can spend half his time on non-Direct Line business. Last week, he unveiled details of a separate US venture, Direct Response, in conjunction with business partner Mr Jim Stone, chairman of Plymouth Rock, a Boston-based insurer. They have raised \$215m to launch the auto insurer which, like Direct Line, will cut out intermediaries and their commissions. The plan is to cover most states within five years.

Talks are in process on a possible German venture following the launch last year of Linsea Directa Insurance. Direct Line is also looking to build telephone sales of other financial services products, such as mortgage and life insurance, to create what Mr Wood describes as "the building society of the future". Mr Wood's restlessness stems not so much from the challenges Direct Line faces - more his determination to have control of his life. His is a director of Royal Bank of Scotland, Direct Line's parent, and a substantial shareholder.

Mr Wood says, "I own a third of 1 per cent of Royal Bank, a 'rounding error'. I don't absolutely control my own destiny... I don't want to find that somebody has turned up at St Andrew Square [Royal Bank's Edinburgh head office] and bought Royal Bank and is telling me what to do." So Mr Wood has prepared his defences against the often rumoured possibility of Royal Bank being taken over. He has rights to buy out Privilege, a sister company to Direct Line which specialises in non-standard motorists. This, he says, could be built up to rival Direct Line. Or, Mr Wood proposes: "If anyone came to buy Royal Bank, if there was any way they would sell me Direct Line at a reasonable cost, I would certainly consider raising the money."

The US venture would be another fall-back. Mr Wood plans to spend one week in four living in Boston which, if he only spends half his time at Direct Line, still leaves opportunities for other projects. He owns about 10 per cent of Direct Response; business partner Mr Jim Stone about 18 per cent. But the two will have control over most decisions and, if the company performs well, Mr Wood's stake would increase substantially. Softly-spoken and coy about his personal finances, there is an entrepreneurial twinkle in his eyes: "I can make between zero and a substantial amount of money."

It may not be easy. The US auto market is dominated by Allstate and State Farm, by no means laggards among insurers. Agents and other intermediaries already make use of telephone sales so the extra convenience Direct Response offers consumers might be limited. Moreover, Mr Warren Buffett's Berkshire Hathaway investment group last year increased its investment in Geico, an insurer which already sells direct to customers - perhaps creating a formidable opponent for Mr Wood. At the same time, the US market is highly regulated. It will be hard to emulate Direct Line's ability to change premium rates

US private auto insurers table with columns for company names and market share percentages.



rapidly and cut prices for the better risks. Mr Wood is undaunted. "When I started Direct Line I took on all the giants of UK insurance." The US market, he points out, is huge and "direct" writers, including Geico, have only small market shares. "It is not as if I'm taking on Coca-Cola."

Direct Response will use Mr Wood's expertise in setting up low-cost operations; underwriting others by saving on building costs and agents' expenses. As for the regulatory system, Mr Stone is a former Massachusetts insurance commissioner who knows the system backwards. Above all, Mr Wood is convinced successful insurance companies will be those closest to the customer. Insurers which try to appeal to brokers and agents, while also setting up direct operations "are caught between the devil and the deep blue sea... You are not in control of your own destiny which is what I always want to be."

Elektrowatt to place UK stake

By Christopher Price in London

Elektrowatt, the Swiss engineering and power group, is to place its 40 per cent holding in Eurodis Electron, the UK electronics components distributor, after failing to find a buyer for the stake. However, analysts said the Swiss group would be lucky to realise £55m from the sale, which would have to be struck at a discount to the prevailing share price. The third-quarter trading statement from Eurodis Electron yesterday said sales growth had slowed and would probably be 10 per cent, rather than the 15 per cent previously forecast for 1996. The company blamed competitive market conditions in Europe. News of Elektrowatt's decision delighted Mr Robert Leigh, chair-

man of Eurodis Electron, who had been furious over the announcement by the Swiss group to sell its stake. The decision was taken in December, just five months after Elektrowatt had merged its electronics distribution business, Eurodis, with Electron House of the UK. Mr Leigh assumed the Swiss group was a long-term shareholder. An unnamed German group held three-way discussions with Elektrowatt and Eurodis Electron, but a price could not be agreed. The Swiss headquarters of Eurodis are to be closed and Mr Rolf Thurnherr, the joint chief executive, is to leave the company. Mr Barry Charles will become the sole chief executive. Estimated cost savings from the rationalisation moves would eventually amount to £1.5m.

CLASS OF ITS OWN

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METALS TRADE IN THE FORMER SOVIET UNION

AIOC's dominance of the region's metals markets ended last month in bankruptcy proceedings. FT writers explain the causes of its collapse

The rise and fall of an empire built in Russia

Imagine the brash, self-styled "masters of the universe" who dominated Wall Street in the 1980s doing deals in an economy as free-wheeling as the wild west.

More than any other company, the rise and fall of AIOC, a New York-based commodities trading group, demonstrated the opportunities and lethal pitfalls of the Russian metals trading market.

Some of the most successful "cowboys" worked for AIOC, owned and run by Mr Alan Clingman, a 36-year-old entrepreneur who says he made his first fortune broking oil in his native South Africa.

At the height of its success, AIOC became a dominant force in the former Soviet Union's metals sector. In May 1993, AIOC took over Swedish conglomerate Axel Johnson's raw materials trading subsidiary, creating a company which Mr Clingman claimed was the biggest independent US-based physical metals trading group, with an annual turnover of \$1bn.

But after riding the highs of the Russian metals market for half a decade, AIOC suffered a series of setbacks last year, including the murder last September of one of its leading figures. This month it was forced into bankruptcy proceedings by disgruntled western creditors. The company also owes Russian banks a reported \$35-\$40m.

AIOC's rise began as the Soviet regime collapsed and its successor states began the long journey to a market economy. Trade in many commodities slipped out of the centralised control of bureaucrats in Moscow. But at the same time, a considerable gap remained between domestic and world prices. That difference made the metals trade a lucrative business.

Obtaining metal on the most favourable terms meant offering Soviet-era factory managers and government function-

aries lavish inducements. In 1994, one western metals trader bitterly complained that a rival company had provided each member of an official delegation visiting London from Kazakhstan with three female companions; he had only supplied one escort per Kazakh when he had entertained the group the night before. He feared he might lose the deal.

But there was also a darker side to the fight for a profitable share of the Russian metals trade. The metals business was seen as one of the most savage sectors in an already tough economy. Last year at least

One western metals trader complained that a rival company had provided each member of an official Kazakh delegation visiting London with three female companions; he had only supplied one escort when he had entertained the group the night before. He feared he might lose the deal.

half a dozen businessmen involved in the Russian metals industry were assassinated.

One of the victims was Mr Felix Lvov, the guiding spirit behind AIOC's Russian operation. Many observers say his murder last September acted as a catalyst for the company's collapse.

A native of Dnepropetrovsk, in Ukraine's industrial heartland, Mr Lvov began to do business deals in the 1980s, when most private enterprise was a crime in the eyes of the Soviet state.

Mr Lvov was a ubiquitous presence in AIOC's Moscow office and, according to several former employees, he was the linchpin of the company's Russian operations. Mr Lvov was particularly crucial to AIOC's ties with the Krasnoyarsk aluminium smelter, the second largest smelter in the world.

But when Mr Lvov was kidnapped, then shot and killed last September, AIOC immediately distanced itself from him.

Former employees and other industry sources say that shortly after Mr Lvov's murder, Mr Clingman circulated a memo which asserted that Mr Lvov had never been an AIOC employee, but had been only loosely affiliated with the company as an occasional outside consultant. In a recent interview, Mr Clingman described Mr Lvov as a mere "local partner".

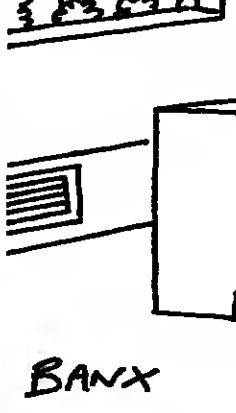
According to former AIOC traders, Mr Clingman justified his actions as "a step that was necessary to save the lives of other people in the company". But both within and outside the company, Mr Clingman's reaction to the murder had painful consequences. On top of losing the profitable Krasnoyarsk business and Mr Lvov's priceless network of contacts throughout the former Soviet Union, his murder soured Mr Clingman's relationship with many other senior AIOC figures and tarnished the company's reputation in the industry.

Clingman took a very ugly position - immediately after the death of Felix, he disowned him," says the head of a Russian metals trading firm based in Moscow. "The people of AIOC also felt wounded. It seemed like a betrayal."

People in the company also say that Mr Clingman's reaction to the murder embittered Mr Alexander Krasner, a Soviet emigré who was a part-owner of the company and had been Mr Clingman's partner from the outset. Mr Krasner, who helped AIOC penetrate the byzantine Russian market and was distantly related to Mr Lvov, left the company at the beginning of this year.

The loss of Mr Lvov and his web of contacts was compounded by the second big reason for AIOC's collapse: substantial trading losses. Some former AIOC employees allege that the company suffered losses of at least \$13m trading metals on the London Metal Exchange in late 1995 and at the beginning of this year.

But other former employees and current AIOC officials say the company's biggest setback was a large trading loss in ferro-chrome, a raw material used in stainless steel production. According to an official



BANX

THANK YOU FOR NOT ASKING FOR CREDIT AS AN ASSASSINATION ATTEMPT OFTEN OFFENDS



BANX

AIOC press release, the company's loss on ferro-chrome, which is thought to be at least \$22m, was triggered when Turkish chrome miners went on strike last summer and blocked deliveries of AIOC chrome ore cargoes for which the company said it had already paid.

"The delay in receipt of this ore forced AIOC to buy in ferro-chrome supplies at the height of the market to meet its contractual commitments to customers in the third quarter," the company said.

The difficulties were compounded in the fourth quarter of last year when AIOC received double quantities of ferro-chrome just as the market crashed.

AIOC's ferro-chrome business had already been damaged last May, when the Kazakh government transferred the management of the country's entire ferro-chrome industry to Japan Chrome, a mem-

ber of the Transworld group and AIOC's fiercest rival in the metals trade in the former Soviet Union. The agreement allowed Japan Chrome to sever most pre-existing contracts unilaterally.

The steel industry also fell under the privatisation scheme, leading to the transfer last November of Karmet, a large Kazakh steel mill, to foreign managers. As in the ferro-chrome industry, the new administration was freed from the company's old debts and contractual obligations.

Sources at the mill and within AIOC say the transfer brought a loss of between \$5m and \$7m for AIOC.

AIOC's weakening positions in Russia and Kazakhstan and its trading losses were the biggest direct causes of its poor performance last year, but industry observers and former employees say the company also suffered because of a strategic mistake.

"At the end of 1994 and the

beginning of 1995 the privatisation process in Russia really took off and the trading companies were divided into insiders, who bought shares, and outsiders who just traded," explained the head of a Russian metals trading company which has acquired a majority holding in one of the country's aluminium smelters. "AIOC made the wrong strategic decision - they didn't spend money to buy stakes in Russian companies."

In an interview earlier this month, Mr Clingman said that one lesson to be drawn from AIOC's experience was that "probably" the only way to survive in Russia today is to buy local companies. But Mr Clingman said that "it was never our ambition to become an investor in Russia."

Former AIOC employees believe the company's trading losses and strategic mistakes were compounded by the ambition of its management.

"It is definitely a case of hubris in the top manage-

ment," said one senior trader who has now left the company. This approach led to high overheads - estimated by some former employees at \$65m-\$65m annually - which made it difficult for the company to survive a lean year.

At the end of 1995 and the beginning of this year, all of these factors came together. AIOC began to collapse. The company experienced severe liquidity problems. It came under intense pressure from its backers in Russia and the west. Russian traders said the company began to sell off stocks "very quickly, with little concern for the best price".

As AIOC's financial woes mounted, Mr Clingman says he sought salvation from Mr Marc Rich, but after talks with the legendary commodities trader fell through, the pressure on AIOC from its creditors became even more intense.

"Once it became known that our discussions with Marc Rich would not amount to a transaction, there were a lot of rumours in the market," said Mr Clingman. "A lot of our creditors became more aggressive in dealing with us. Without continuing financing, the company goes into a melt-down situation. It became a self-fulfilling situation."

In early March, several brokers issued margin calls to AIOC. When the company failed to meet them, the brokers liquidated AIOC's open positions, cancelled the firm's lines of credit and asked for immediate payment. Last month, fearing that AIOC would ditch its foreign assets in a fire-sale, a group of brokers, including Lehman Brothers, Credit Lyonnais Rouse, Merrill Lynch and Mitsui Bussan, filed involuntary Chapter 11 proceedings against the company.

In a letter to AIOC filed to the court, Mr William Olshan, a Lehman Brothers vice-president, alleged the company may have obtained credit "in bad faith".

But some former and current AIOC employees are more worried about the local reaction. Some ex-employees said they had received serious warnings, and well-informed Russian businessmen believe AIOC's

senior management could be in a dangerous position. "The past three months have been totally depressing," said one former employee. "It was a time of death threats. It's not that they say 'we will kill you', more like 'we suggest for your safety that you pay us'."

Tokobank, Manatop and Vneshtorgbank, AIOC's biggest Russian creditors, reacted publicly to the company's collapse in a mild way, insisting that it would not significantly affect their balance sheets.

But a source at one of the banks said AIOC's default

Well-informed Russian businessmen believe that AIOC's senior management could be in a dangerous position. Some ex-employees said they had received warnings. "The past three months have been depressing," one said. "It's not 'we will kill you', more like 'we suggest for your safety that you pay us'."

marked a turning point in the assumptions Russia's fledgling capitalists make about their western counterparts. "It is a paradoxical situation for us, because we are accustomed to Russian clients not returning credits, but we don't expect it of westerners," he said.

Some observers see the crash of the high-flying AIOC traders as a Russian *Bonfire of the Vanities*, and warn that other foreign companies may collapse as the easy money of the early 1990s gives way to a more settled, long-term business environment. But others say the US company's failure could also, inadvertently, contribute to the coming of age of the Russian market, as Moscow financiers learn that even western capitalists can go broke.

Reports by Chrystina Freeland in Moscow, Kenneth Gooding in London, Sander Thoenes in Amst and Matthew Kaminski in Kiev

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Table with columns: Bid, Offer, Bid, Offer, Bid, Offer. Lists various financial instruments and their prices.

Mortgage Securities (No.3) PLC. \$30,000,000 Class A2, \$15,000,000 Class A3, \$8,000,000 Class B. Interest payable 31 July 1996 will be as follows: Class A2, 6.6125% per annum; Class A3, 6.7125% per annum; Class B, 7.0625% per annum.

DEEPENING AND WIDENING OF THE ENTRANCE TO THE VENTSPILS LIQUID CARGO AREA. 1. The Ventspils Port Authority is a port authority established in 1994 under the Port Law of the Government of Latvia. 2. The Ventspils Port Authority has initiated a long term development plan for the port (1994 - 2004). 3. The dredging work required for this widening and deepening consists of the excavation, transportation and disposal of material consisting of: medium silt clays; moraine sediments (fill), mainly consisting of still gravely sandy clayey silt; dense sands; medium coarse fine sands. The material to be dredged is invested with boulders and cobbles and large moraine stones. The total quantity of material to be dredged amounts to approx. 4.5 million m³ of which approximately 3 million m³ sand, 0.7m³ clay and 0.8 million m³ moraine sediments (fill).

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COMPANIES AND FINANCE: EUROPE

Motorola team seeks EU probe over Irish licence

By John McManus in Dublin

A consortium involving Motorola, of the US, is to complain to the European Commission over the Irish government's handling of the competition for Ireland's second GSM mobile phone licence.

Persona, the consortium involving Motorola and ESB, the Irish state electricity company, was one of five unsuccessful bidders for the licence, which was awarded last November. However, Esat Digifone, the successful Irish-Norwegian consortium, has yet to sign the licence, which is still being drafted by the Irish attorney general's office.

Motorola is claiming the competition process lacked transparency and openness, and therefore infringed European law. They also claim it was skewed to produce less competition for Eircell, the state-owned mobile phone company.

This included capping the licence fee at 12.5m (€33.3m) and giving a relatively low weighting to tariffs in the selection criteria. Such action could constitute state aid to Eircell, maintains the Motorola consortium.

Motorola and other US corporations involved in unsuccessful consortia have enlisted the help of the US embassy in Dublin. Mr Dennis Sandberg, the consul at the embassy, has written to the Irish department of communications asking it to meet the US companies to explain why they were unsuccessful.

Tele Danmark in Internet expansion

Tele Danmark, the Danish telecoms group, said it was launching a Danish electronic marketplace on the World Wide Web that would ease access to the Internet and raise the number of Danish users by hundreds of thousands by the end of 1997, reports APX News from Copenhagen.

About 2 per cent of Denmark's 2.4m households now have access to the Internet, and growth is hampered by the fact that ordinary users find the interface complicated, it said.

"Our surveys show that Internet access is still limited to those with a special computer interest," the company said.

Its new CD-Rom product, Opasia, will offer simplified access to 40 Danish companies and services including banks and newspapers, and various public services, for DKr25 (\$4.23) a month.

For a further DKr40, users can have full access to the World Wide Web with their own address. The package includes a Danish version of Netscape software and quarterly CD-Rom updates, it said.

In its 1995 report, Tele Danmark said it was the largest provider of Internet connections in Denmark.

Mr Henning Klein, chief executive of the passenger division of Lufthansa, the German airline, said 1995 passenger numbers grew 7.9 per cent and its load factor grew by 1.6 percentage point, reports Reuters from Hong Kong.

Jyske Bank 'ahead of budget' at DKr148m

By Hilary Barnes in Copenhagen

Denmark-based Jyske Bank, which ranks fourth among Danish commercial banks with assets of DKr53bn (\$8.96bn), boosted first quarter pre-tax earnings to DKr321m this year, against DKr148m in the same period in 1995.

With a rise in post-tax income from DKr144m to DKr148m, earnings per share were ahead from DKr17.78 to DKr20.13.

The bank, which is the only Danish bank to publish quarterly earnings figures, said the results were ahead of budget.

Despite a decline in short-term interest rates this spring, net interest and fee income rose by DKr20m to DKr372m. Advances were up 9 per cent to DKr28.17bn, while deposits grew by almost 4 per cent to DKr38.06bn.

Operating income was not greatly influenced by adjustments for the market value of the securities portfolio, an item that often causes significant year-to-year fluctuations in Danish banks' results.

The first-quarter securities and foreign exchange revaluation item was a positive DKr52m this year, compared with DKr47m last year, said the bank.

Operating expenses increased by 3 per cent to DKr362m. Loan loss provisions were raised from DKr51m to DKr79m, attributed by the bank to "statistical provisions" on private customers in Danish banks' results.

Non-performing loans were DKr597m, down from DKr784m a year ago.

The bank confirmed its year-end forecast of profits before revaluation of securities and extraordinary items of about DKr600m-DKr750m, after provisions of DKr300m-DKr350m. Earnings on this basis were DKr686m in 1995.

The bank's earnings, however, are highly sensitive to changes in bond prices and yields. A change of 1 percentage point in average bond yields means a difference of plus or minus DKr100m-DKr150m in the bottom line, according to the bank.

Jyske Bank's capital adequacy ratio at the end of the first quarter was 11.7 per cent, of which 9.7 per cent was Tier 1 capital, which alone was more than enough to fulfil the legal minimum capital adequacy ratio of 8 per cent, the bank pointed out.

Astra sets its sights on further growth

Swedish drugs group sees no merit in the fashion for alliances, writes Hugh Carnegie

Mr Hakan Mogren is a tall, imposing Swede with a shock of silver hair whose cheerful demeanour disguises a tough streak - especially when it comes to those who wonder when the spectacular run of success achieved by Astra, maker of one of the world's two biggest-selling drugs, will start to wane.

"People say 'trees don't grow to heaven,'" Mr Mogren, chief executive since 1988, acknowledges with a smile. "They are looking for negative factors about Astra. But I'm sorry. Those factors are just not there."

As Astra prepares for a listing next month on the New York Stock Exchange - only the second Swedish company to do so - Mr Mogren is no less defiant about his strategy of maintaining the independence of Astra.

The group has ridden to the top of the pile of Swedish companies in market value on the back of its blockbuster anti-ulcer drug, Losec. But it remains a medium-sized force in the world pharmaceutical market.

Nonetheless, Mr Mogren is distinctly unimpressed by the wave of takeovers and mergers sweeping the drug-makers' world. The latest deals have seen the merger of Switzerland's Sandoz and Ciba to form Novartis and, closer to home, the marriage of Sweden's Pharmacia with Upjohn of the US.

"I cannot understand why some of these mergers have been done," declares the Astra chief. His suspicion is that low-growth, high-cost operators will "mix old problems with new problems and get drowned."

A company with Astra's high rate of growth does not need such an alliance, he says. "If you are growing at high speed, you can't do mergers and acquisitions at the same time."

Thanks to Losec, which this year is set to become the world's biggest-selling prescription drug, Astra's sales growth in recent years has risen at more than double the industry average, and profits growth has far outstripped sales growth. Last year, net profits jumped 29 per cent to SKr5.8bn (\$1.29bn) on sales up 28 per cent at SKr35.5bn.

But the very strength of Astra's performance has begun to raise worries among investors about how long it can sustain such a record. This year, profits are expected to be damped significantly by the stronger Swedish krona.

More fundamentally, Losec's patent protection will run out in 2001 and analysts are concerned that Astra does not have the product pipeline to replace it.

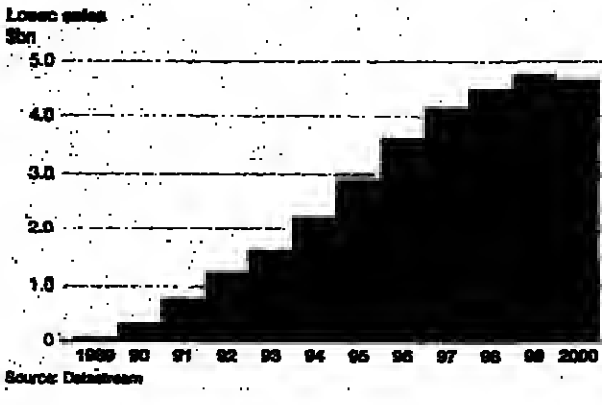
There are also worries about new ulcer treatments that may erode the long-term use of Losec and its rivals.

"Some time in the future, Astra will be a victim of its own success," says a London-based pharmaceutical analyst, who declined to be identified.

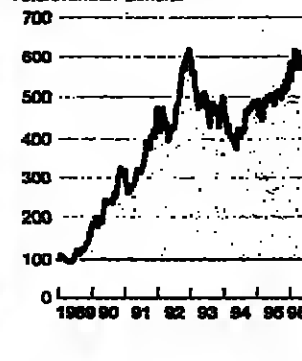
"Losec is a great product, but we have seen in the past that companies with such successful drugs cannot replace them organically."

Characteristically, Mr Mogren has a robust riposte.

Astra's relentless rise



Share price relative to the Affärsvärlden General



Hakan Mogren, Astra's Chief Executive

"Of course, a product like Losec is a once in a lifetime product. But we strongly believe that the sum of all our other products is going to give us volume increases in the future matching what we have had with Losec."

Before that happens, however, Astra expects a great deal more in performance from Losec. The drug has won a 40 per cent market share in Europe, just over 25 per cent in the US (where it is now sold through Astra-Merck, a joint venture with the US company) but only 5 per cent in Japan.

Underlying sales growth in the US is running at a rate of some 40 per cent a year. Mr Mogren says Losec has to date fulfilled only between one-third and one-half of its market potential.

He also argues that market worries about changing treatments of ulcers are misplaced. In the lower intestinal tract, the discovery that a bacterium called helicobacter pylori was a cause of peptic ulcers has led to a breakthrough where the ulcers can now be eliminated quickly through the combination of Losec and antibiotics.

This has caused some to question whether Losec will, therefore, start to eat into its own potential as a long-term chronic treatment. But Mr Mogren has a robust riposte.

Mogren says that the new treatment offers "enormous" new potential for Losec. And, he says, upper tract ulcers are not caused by the bacterium, which means long-term treatments will still be needed for them.

But what has Astra got in the product pipeline to support Mr Mogren's bold assertion that the company will have the drugs to secure its post-Losec future?

Of Astra's three core areas apart from gastro-intestinal treatments - respiratory, cardiovascular and pain control treatments - the biggest success to date is for Pulmicort, an anti-asthma therapy increasingly administered by Astra's Turbuhaler inhalation device. Pulmicort sales rose 17 per cent last year to SKr4.3bn.

Astra is keenly awaiting approval for the Pulmicort-Turbuhaler combination in the US. However, Pulmicort on its own will not take up the slack when Losec sales begin to slow. Astra has, therefore, moved to expand greatly its research and development effort to increase the flow in its product pipeline.

Most notably, it bought the R&D operations of the UK's Fisons last year for SKr2.4bn. Altogether, Astra's R&D bud-

get will reach SKr7bn this year, a 75 per cent increase over two years ago.

Mr Mogren says Astra has as many projects in the vital - and expensive - clinical phase of development as in the pre-clinical stage.

As well as projects in its four core areas, Astra is working on potential treatments for central nervous system disorders, such as strokes, and is looking to other areas such as immunotherapy.


But the company's R&D spend as a proportion of its sales is only now coming up to industry averages.

"Mr Mogren's statement about future volumes implies far more breadth in their pipeline than is visible at the moment. It is a very confident statement," says the London-based analyst.

Confident is certainly a word that applies to Mr Mogren. The market may speculate that Astra would be a perfect partner for most of the world's top 10 pharmaceutical groups.

But with an expensive price tag and a core shareholder in the Wallenberg empire, Astra is not an easy takeover target. And Mr Mogren is not looking for a merger. His sights are set on more growth. "The distance between the trees and heaven is very large," he says.

All of these securities having been sold, this announcement appears as a matter of record only.



Orange plc

Global Offering of 357,500,000 Ordinary Shares

in the form of Ordinary Shares or American Depositary Shares

Joint Global Coordinators and Joint Bookrunners

Goldman Sachs International

Dresdner Bank-Kleinwort Benson

European Offering

178,750,000 Ordinary Shares

This portion of the offering was offered to institutional and certain other investors in Europe (including an offer to the public in the United Kingdom).

Dresdner Bank-Kleinwort Benson

ABN AMRO Hoare Govett

Cazenove & Co.

Credit Lyonnais Securities

North American Offering

143,000,000 Ordinary Shares

This portion of the offering was offered in the United States and Canada.

Goldman, Sachs & Co.

Donaldson, Lufkin & Jenrette
Securities Corporation

CIBC Wood Gundy Securities Corp.

Alex. Brown & Sons
Incorporated

PaineWebber Incorporated

Hoak Securities Corp.

Goldman Sachs International

NatWest Securities Limited

HSBC Investment Banking

North American Offering

143,000,000 Ordinary Shares

This portion of the offering was offered in the United States and Canada.

Kleinwort Benson North America, Inc.

Lehman Brothers

Merrill Lynch & Co.

Gordon Capital Inc.

J.P. Morgan & Co.

Dain Bosworth
Incorporated

Sutro & Co. Incorporated

Rest of World Offering

35,750,000 Ordinary Shares

This portion of the offering was offered outside of Europe and North America.

Dresdner Bank-Kleinwort Benson

HSBC Investment Banking

Goldman Sachs (Asia) L.L.C.

Nikko Europe Plc

Peregrine Capital Limited

April 1996

SCHERING

Payment of Dividend

Schering Aktiengesellschaft Berlin

NOTICE IS HEREBY GIVEN to shareholders that following a resolution passed at the Annual General Meeting of shareholders held on 30th April, 1996 a Dividend for the year ended 31st December, 1995 will be paid, as from 2nd May, 1996 at the rate of DM 1.55 per share of DM 5 nominal against presentation of Coupon No. 61.

All payments will be subject to a deduction of German Capital Yields Tax at 26.875% (25% plus 7.5% "Solidarity Surcharge" on the Capital Yields Tax).

Coupons should be lodged with:-

S. G. WARBURG & CO. LTD.
Paying Agency,
2 Finsbury Avenue,
London EC2M 2PP

from whom appropriate claim forms can be obtained.

Coupons will be paid at the rate of exchange on the day of presentation.

United Kingdom Income Tax will be deducted at the rate of 5% unless claims are accompanied by an affidavit.

German Capital Yields Tax deducted in excess of 15% is recoverable by United Kingdom residents. The Company's United Kingdom Paying Agent will, upon request, provide shareholders or their agents with the appropriate form for such recovery.

2nd May, 1996 Schering Aktiengesellschaft

Temple Court


Mortgages (No. 1) PLC

£175,000,000

Mortgage Backed Floating Rate Notes 2029

The rate of interest for the period 30th April, 1996 to 31st July, 1996 has been fixed at 6.3292 per cent. per annum. Coupon No. 26 will therefore be payable on 31st July, 1996 at £158.94 per coupon.

S.G. Warburg & Co. Ltd.
Agent Bank



The Council of Europe
Resettlement Fund for
National Refugees and
Over-Population in
Europe

Italian Lire
150,000,000,000
(ITL 63,000,000,000 Outstanding)

Reverse Floating Rate
Notes due 1998

For the Interest Period 30th
April, 1996 to 30th October,
1996, the Notes will carry an
Interest Rate of 11.97708 per
cent. per annum with an Interest
Amount of ITL 299,427 per
ITL 5,000,000 Note, and ITL
2,994,270 per ITL 50,000,000
Note, payable on 30th October,
1996.

Listed on the Luxembourg Stock Exchange
Bankers' Trust
Company, London Agent Bank

COMPANIES AND FINANCE: THE AMERICAS

US insurers weather the storm

By Richard Waters
in New York

An increase in weather-related losses failed to dent the growth in operating income at two of the US's biggest insurance groups, CNA Financial and Cigna, during the first three months of this year.

The two companies, which have been at the centre of the restructuring under way in the US property/casualty insurance industry, each suffered the effects of the severe weather which hit large parts of the US last winter.

However, their latest results also reflect the overall improvement in earnings at US insurers which has followed the recent wave of restructurings and mergers, as well as improving conditions in the commercial insurance markets after a long period of margin pressure.

The solid operating earnings reported by these and other big US property/casualty insurers for the opening months of this year follow the most successful year on record for the industry.

Thanks to the absence of big hurricanes or other catastrophic losses, the industry registered after-tax profits in 1995 of \$20.1bn. This was twice as much as the year before,



CNA is controlled by the Lowes group of Mr Larry Tisch

according to figures compiled by the Insurance Services Office.

The rebound in earnings, and a renewal in stock market enthusiasm for some insurers, has ensured a strong stock market debut in recent days for Travelers/Aetna. The company was created when Travelers, the US financial services group, merged its property/casualty operations with those of Aetna, which it acquired for \$4bn.

Just under 9 per cent of the new unit was sold to the public

in an initial public offering last week, raising \$875m. Yesterday lunchtime the company's shares were trading at \$27, compared with a launch price of \$25, valuing the company at more than \$10bn.

Net income at both CNA Financial, which reported results yesterday, and Cigna, which reported late on Tuesday, were distorted by investment gains.

CNA, an insurance company which is controlled by Mr Larry Tisch's Lowes group, bought the struggling Conti-

ental insurance company a year ago, making direct comparisons with a year before difficult.

Overall, CNA reported net income of \$395m, or \$5.30 a share, on revenues of \$4.3bn. That compared with after-tax profits of \$153m, or \$2.44, on revenues of \$3.1bn the year before.

The insurer's earnings were lifted by substantial investment gains, which accounted for more than half its earnings per share for the period. While earnings from the property/casualty business rose to \$152m for the period, from \$118m a year before, pre-tax investment gains jumped to \$305m, from \$26m.

Cigna registered after-tax profits of \$238m, or \$3.10 a share, down from \$290m, or \$4, from the previous year.

The company's operating income, though, climbed 50 per cent to \$219m, largely due to a turnaround in its domestic property/casualty business and an advance in its profitable international operations.

Cigna won approval earlier this year for a controversial restructuring of old environmental and asbestos liabilities. This move which was intended to help restore the health of the group's property/casualty business.

NEWS DIGEST

US chemicals group takes over rival

Uniroyal Chemicals, the speciality chemicals producer, is to be acquired by fellow chemicals group Crompton & Knowles in an agreed deal valued at about \$1.4bn, including debt.

Crompton will issue stock worth \$15 for each Uniroyal share, valuing Uniroyal's equity at just over \$200m.

The combined group will have debt of about \$1.1bn. Crompton said it would slash its dividend from the current \$0.54 annually to \$0.05, as a means of paying down debt to the point where the company's debt rating attains investment grade. Uniroyal's shares jumped 2% to \$14 in early trading, while Crompton's rose 3% to \$16.

The deal marks the end of the company's independence after more than a century. In 1985, Uniroyal, then the third largest US tyre company, put its chemicals business up for sale to help pay down debt acquired in fighting off the corporate raider Mr Carl Icahn. Uniroyal Chemical was bought for \$710m in 1986 by financiers Mr Nelson Feltz and Mr Peter May. In 1988, it was sold to management for \$240m in cash plus the assumption of \$60m in debt. In the same year, the Uniroyal tyre business was taken over by Michelin of France.

With sales last year of \$1.1bn, Uniroyal specialises in agrochemicals and elastomers. Its agrochemicals business has at times proved controversial. In 1989 it withdrew Alar, its best known product used to keep apples fresh, on charges that it might be a carcinogen. Last month, it agreed to withdraw the pesticide propargite from use on 10 crops commonly used on baby foods, on similar grounds.

Crompton & Knowles, the smaller of the two in sales terms, made net profit of \$40.5m last year, down 24 per cent from a peak two years earlier, on sales of \$668m. The company makes dyes, flavours and fragrances, and blow moulding equipment for use with plastics.

The combined company will be known as Crompton & Knowles, and will be headed by Mr Vincent Calarco, Crompton chairman.

Moody's Investors Service, the credit rating agency, yesterday said it had placed the rating of Uniroyal Chemical on review for potential upgrade. About \$800m of long-term debt securities were affected, Moody's said.

Tony Jackson, New York

Air Canada increases loss

Weak domestic markets and the heavy cost of international route expansion deepened Air Canada's first-quarter net loss to C\$96m (US\$70.5m) or 63 cents a share, from C\$88m, or 74 cents, a year earlier. This was on revenues of C\$1.1bn against C\$1bn.

The first-quarter normally shows a loss because of seasonal factors. "International profitability will accelerate as new routes are fully established," the group said. "Air Canada will continue to focus on cost reduction and developing higher-margin markets to ensure adequate returns."

Passenger revenues rose 13 per cent overall because of strong international results. International traffic was up 24 per cent and yield increased 3 per cent; domestic traffic rose 11 per cent but revenues only 1 per cent because of fare price wars. Domestic yields dipped 9 per cent. Severe weather also hit revenues in Canada.

Robert Gibbens, Montreal

Petrocan considers asset swap

Petro-Canada is considering exchanging some of its interests in Canada's east coast offshore oil fields for assets of one or more international companies. Mr James Stanford, president, said in Calgary that talks were under way with several unidentified groups but would take several months to complete. He would not comment on reports that one of the companies involved was Norway's Statoil.

Petrocan owns 25 per cent of the C\$7bn (US\$4.4bn) Fibria project, 200 miles east of St John's, Newfoundland. It is due to come on stream in 1997, with a target production of 135,000 barrels a day. Petrocan also owns part of nearby Terra Nova, planned to come on stream in 2001, producing 100,000 barrels daily.

Robert Gibbens

Disposals deepen Domtexp deficit

Dominion Textile, the international denim and non-wovens producer, said it would post a C\$38.2m (US\$28m) net loss on the sale of its nine Canadian and US yarn plants. The disposal should be completed by the end of June, for net proceeds of about C\$10m.

Including this loss and other special items, Domtexp posted a net loss of C\$46.1m or C\$1.13 a share for the third quarter ended March 31, against a profit of C\$10.1m or 23 cents a year earlier, on sales of C\$266m, down 6.6 per cent. The loss for the nine months was C\$53.8m, or C\$1.37 a share, against profit of C\$25.3m, or 53 cents a share, on sales of C\$817m against C\$794m.

Robert Gibbens

EDS eyes Roccade

Electronic Data Systems the computer services consultancy being spun off from its parent General Motors, wants to acquire Roccade, the Dutch state-owned information technology company, Dutch newspapers reported. Discussions with the management of the former state computer centre are due to start next week.

Algemeen Dagblad said the approach was confirmed yesterday by a spokesman from the home affairs ministry, owner of Roccade, which is due to be privatised this year. Mr Jos Schoemaker, EDS North Europe vice-president, was reported to have said talks with Roccade management would begin next week. He added that EDS had no interest in a hostile takeover.

AFX News, Amsterdam

This announcement appears in a matter of record only.
April, 1996

Rutland Trust PLC

£29,700,000
Senior Debt Acquisition Facilities

in support of the acquisition of
MTS (Holdings) Limited
"Thamesport"

Arranger and Lead Underwriter
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Hill Samuel Bank Limited Generale Bank S.A./N.V.

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London Branch London Branch

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COMPAGNIE DE PARTICIPATIONS FINANCIERES (LUXEMBOURG) S.A.
Registered office: 204 Route d'Arion, L-8010 Strassen
R.C. Luxembourg B 28 500

The shareholders are invited to attend the ANNUAL GENERAL MEETING which will be held at the Hotel L'Olivier, 140A Route d'Arion, L-8008 Strassen at 2.00 pm, on 20th May 1996, with the following agenda:

- To receive the report of the Directors for the year ending 31st December 1995.
- To receive the report of the Auditor for the year ending 31st December 1995.
- To approve the annual accounts for the year ending 31st December 1995.
- To approve the appropriation of the results, to declare a dividend of DEM 0.34 (34 Pfennigs) per share and to fix the date of payment.
- To grant discharge to the Directors with respect to their duties during the year to 31st December 1995.
- To grant discharge to the Auditor with respect to their duties during the year to 31st December 1995.
- To increase the number of Directors to 4 (four).
- To approve the appointment of Mr Andrew McGovern as a Director of the Company.
- To receive a report on the management policies of the Company and to adopt the same insofar as may be appropriate.
- Any other business.

THE BOARD OF DIRECTORS

ANZ Bank
Australia and New Zealand
Banking Group Limited
Australian Company Number 003 357 522
(Incorporated with limited liability in the State of Victoria, Australia)
U.S. \$300,000,000
Perpetual Capital Floating Rate Notes

For the six months 30th April, 1996 to 31st October, 1996 the Notes will carry an interest rate of 5.7125% per annum with an amount of interest U.S. \$291.97 per U.S. \$10,000 Note and U.S. \$7,299.31 per U.S. \$250,000 Note, payable on 31st October, 1996.
Listed on the Luxembourg Stock Exchange.

Bankers Trust Company, London Agent Bank

Union Bank of Norway
U.S. \$27,000,000
Subordinated Floating Rate Notes due 2002

In accordance with the provisions of the Notes, notice is hereby given that the Rate of Interest for the three month period ending 30th July, 1996 has been fixed at 7.50% per annum. The interest accruing for such three month period will be U.S. \$9,226.39 per U.S. \$300,000 Note against presentation of Coupon Number 16.

Union Bank of Switzerland
London Branch Agent Bank

26th April, 1996

Brazil groups create results jungle

Legislation and tax disputes confuse analysts, says Jonathan Wheatley

Predicting a company's performance is always a tricky business. In Brazil, measuring past performance is no easier.

Balance sheets, even for reputable companies, often contain distortions that only experienced eyes can identify; some are undetectable. Now analysts fear a law change affecting inflation-adjusted accounts may make many balance sheets virtually meaningless.

Lafis, a research group, studied the 1995 accounts of 66 publicly-traded companies. Using only information in the balance sheets, it made its own calculations of each company's net profit or loss by separating extraordinary items from the company's normal activities. Of the 66, Lafis found that the true results of 35 companies were lower than published, while 13 were higher and only 18 were the same.

Extraordinary items occur in balance sheets around the world, but Mr Jorge Kotani of Lafis says they weigh particularly heavily in Brazil because of frequent changes to tax laws and drawn-out legal disputes between companies and the tax authorities, which companies often win. That means Brazilian company accounts are peppered with provisions for future tax payments, and with reversals of past provisions.

But companies are not obliged to show provisions for future taxes on their published balance sheets - only on their unpublished statements to the tax authorities. When a company reverses a past provision - an accounting procedure that creates a profit - it can do so at once, or over several years. Some companies use these profits to cover up poor operating performance.

"What companies are doing is absolutely and definitely within the law," says Mr Carlos Yamashita, also of Lafis.

"They may, and in some

cases must, include extraordinary items in the profit or loss line. But the law gives them room for manoeuvre."

Severe doubts about the reliability of audited balance sheets surfaced recently when two high street banks revealed significant liquidity problems within days of issuing healthy results.

Fresh concerns have been raised by a law passed at the end of last year which determined, as part of the government's anti-inflationary tactic of removing all indexing from the economy, that Brazil's securities commission, the CVM, can no longer force quoted companies to publish inflation-adjusted accounts. These expressed results for the past year and, for comparison, the previous year calculated according to currency values at the last day of the last accounting period.

The government says such accounts are not needed now that monthly inflation has been cut from double digits to about 1 per cent. But observers say comparing a company's performance over time will become impossibly complicated.

The CVM, which shared these fears, told quoted companies to publish unadjusted

accounts but gave them the option of continuing to publish corrected accounts as well.

"The previous system allowed us to compare apples with apples," says Mr Ivan Clark, a partner at accountants Price Waterhouse in São Paulo. "But even inflation of 10 per cent or 15 per cent a year accumulates very quickly."

One example is the petrochemicals company Copene, which published results for the first quarter of 1996 according to both methods. One set, which ignored 3.5 per cent inflation during the period, showed pre-tax profits of R\$23.3m (US\$23.6m). The second, which allowed for inflation's effects, showed profits of R\$45.8m.

"Analysts must decide which result they think most accurately reflects our performance," says Mr Wong Shin, Copene's financial director.

His argument in favour of the adjusted method is simple: "If you borrow money at 2 per cent a month and inflation in the month is 1.5 per cent, what is the real interest rate? Two per cent or 0.5 per cent?"

Even if companies decide to publish two sets of results, there will still be plenty of

room for confusion. In the past, accounts were adjusted according to the government's official index, known as the Ufr. The Ufr, however, is being phased out. Now companies must decide for themselves whether to adjust their results in line with the US dollar, or with any one of the many other inflation indices available.

Not all companies will do so. WEG, a maker of electric motors, announced it would only publish unadjusted results. Mr Alidior Lueders, finance director, says that annual inflation of less than 20 per cent will have little impact on his figures.

Analysts say other companies will follow WEG because adjusted accounts are very close to the management accounts which companies use when making operational decisions.

Not publishing adjusted figures will reduce the amount of strategic information available to competitors.

This year sees an additional complication. At the end of last year, the government cut the top rate of corporate income tax from 43 per cent to 25 per cent. But, by simultaneously ending inflation-adjusted tax accounting, it ended the practice by which companies used to correct the values of their fixed assets and net worth.

In the past, a company whose net worth exceeded fixed assets would see its tax base reduced. That will no longer happen, so capitalised companies will tend to fare worse under the new regime, while indebted companies will tend to do better.

In Brazil, where the cost of borrowing is very high, well-run companies are usually well capitalised. For many, the losses from the end of inflation-adjusted tax accounting are likely to outweigh the benefits of lower tax rates. Companies and investors will have to wait until the end of 1996 to find out.

Brazilian company results 1995

	published net profit (loss) US\$m	Lafis net profit (loss) US\$m
Aesita	52.1	11.5
Alpargatas	27.7	0.6
Brago Mineiro	14.1	7.3
Brasma	261.6	213.8
Copene	148.8	143.5
Cosipa	73.8	(113.1)
Eletrobras	178.3	2,154.0
Indep-Maxdon	(109.0)	(146.6)
Ilva	221.1	493.3
Klabin	67.5	127.8
Metel Lave	20.2	6.8
Sadia Concórdia	82.4	43.0
Várig	(7.1)	(7.1)
WEG	30.5	30.5

*Lafis required results excluding extraordinary items

Source: Lafis

BZW has 38 offices in 30 countries. But it's not just being present in a market that counts. It's the quality of presence we have there

Leach

2025/05/02

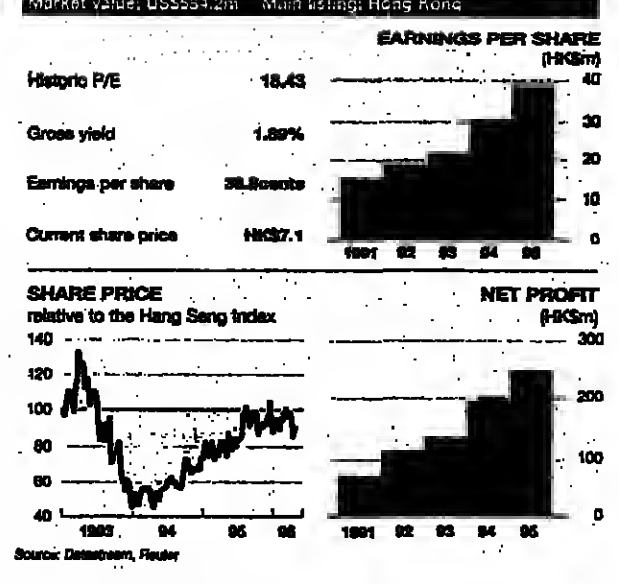
COMPANIES AND FINANCE: ASIA-PACIFIC/INTERNATIONAL

Giordano struggles to control its franchisees

The Hong Kong retailer is in the dark as Chinese authorities force a rash of store closures, writes Louise Lucas

Franchise operators are keeping a close watch on Giordano, the Hong Kong retailer that has suffered a rash of store closures in China. Their concern is to establish whether the closures stem from poor corporate management or over-zealous government bureaucracy.

PROFILE: GIORDANO HOLDINGS



A diary of problems

August 8 1994: Beijing store closed; follows criticism of Chinese premier Li Peng in Lai's Next Magazine

is still the crux of Giordano's problems. Belling is convinced he retains an interest in the company, possibly through a nominee or related trust.

Pacific BBA in A\$275m bid to acquire Azon

The cash offer is worth only 10 cents more than the price at which Azon shares were floated three years ago.

AirNZ sees Ansett float in a 'few years'

Air New Zealand has confirmed that a flotation of Ansett, the Australian airline, is a possibility in a few years' time - assuming its plan to buy a 50 per cent stake in the carrier from Australia's TNT first wins regulatory approval.

Impala intent on leaping European fences

SA group plans to overcome veto of merger with Lonrho platinum arm, says Mark Ashurst

The European Commission's veto last week of a platinum merger has added controversy to the intrigue over the future of Lonrho's mining assets.



Michael McMahon: 'The merger may be on a life support, but it ain't dead'

ruling was prejudiced by speculation over Anglo's interest in Lonrho. "Basically, all that talk [over the role of Anglo] has muddled the water."

'I wouldn't like to defy the EC, but I am quite happy to challenge them' - Michael McMahon, Impala chairman

could restrict the supply of platinum to world markets. When the commission announced its finding last week, it issued a warning that any subsequent attempt by Anglo to acquire Lonrho's platinum interests would also be vetoed.

threshold which is one of several criteria governing the commission's intervention. The merger has also been cleared by the South African Competition Board, contrary to a claim last week by the EU competition commissioner, Mr Karel van Miert, that the South African authorities supported its ruling.

Taspen plans to sell half its stake in Barito Pacific

Taspen, one of Indonesia's largest state-controlled pension funds, plans to sell half of its 17 per cent stake in Barito Pacific Timber, the Indonesian logging company which ranks as the world's largest exporter of hardwood plywood.

Advertisement for BZ Investment Banking, featuring a globe and the text 'INVESTMENT BANKING. FROM A TO Z'.

COMPANIES AND FINANCE: EUROPE

Banco Santander to buy out partner in CCH

By George Graham, Banking Correspondent

Banco Santander, the Spanish banking group, is to pay DM300m (\$195.6m) to buy out the 50 per cent stake held by its partner, Royal Bank of Scotland, in CC-Holding, parent company of Germany's CC-Bank consumer finance group.

CC-Bank, largely based in the Rhineland, was one of the operations turned into a joint venture when Santander and

RBS formed their partnership in 1988.

The two banks each took 50 per cent, but said yesterday that it had gradually become clear that it would be more practical to have a single owner.

Santander offered to buy out RBS's stake in CC-Holding for a price equivalent to 27 times 1995 net earnings of DM15.4m.

Mr George Mathewson, chief executive of RBS, said the investment in CC-Bank had

been a successful one. "We believe the price paid is a fair one," he said.

RBS and Santander remain closely linked in other ways, notably through their crossed shareholdings.

Santander now owns 9.9 per cent of RBS, while RBS has been gradually increasing its stake in Santander this year to 4.3 per cent. With the exercise of an option, that is expected to rise shortly to 4.9 per cent.

The two are also allied in Portugal and in the Iber

cross-border payments system. CC-Bank's principal line of business is financing sales of around 18,000 cars, furniture and electrical equipment dealers.

The bank increased its lending volume by 11 per cent last year to DM2.61bn, and its customer deposit base by 20 per cent to DM3.07bn.

RBS will receive DM206m from Santander for its 50 per cent equity holding in CCH. This payment will take the form of loan notes, guaranteed

by the Spanish bank, with a maturity of 20 years.

The loan notes are redeemable after 10 years, but RBS said it had no plans to dispose of them before redemption.

RBS also owns DM94m of loan capital in CC-Holding, which it will sell for cash, plus accrued interest.

The sale is expected to improve RBS's tier 1 capital ratio, which stood at 6.3 per cent at the end of November 1995, by around 30 basis points.

It will improve the bank's overall capital ratio, 10.3 per cent at the end of November, by 10 basis points.

RBS is due to report its interim results for the six months to the end of March next week.

They are expected to have suffered from a downturn in profits at Direct Line, the bank's insurance subsidiary, which has been hit by the rising cost of claims and by fierce competition over premiums in the UK market.

Lawyers strive to keep parts of Bremer afloat

By Michael Lindemann in Bonn

Bremer Vulkan, Germany's largest shipbuilder, yesterday said it was bankrupt after it failed to reach an agreement with creditors.

However, lawyers who have been trying to keep the 102-year-old company afloat since February said three ships were still being built at yards in Bremen and Bremerhaven, the two north German towns where the group is based, and that they were also in talks to build further ships which could be built by parts of the group not yet bankrupt.

Meanwhile the city state of Bremen, which had extended guarantees of DM900m (\$577m) to the company because it was the region's biggest employer, yesterday warned that DM300m of those loans might not be recovered.

Bremen is already the most heavily indebted of Germany's 16 Länder or states. A consortium of more than 30 banks, led by Commerzbank, Dresdner Bank and Bremer Landesbank, is owed a further DM2.9bn.

Mr Jobst Wellensiek, the lawyer who has been handling the rescheduling of the company's debts, said Bremer Vulkan

had not been able to meet the conditions of the Vergleich, which requires a company to pay back 35 per cent of what it owes within 18 months.

Bremer Vulkan would only have been able to pay back 10 per cent of its debts in that period, Mr Wellensiek said, adding that the company had assets of DM1.1bn and liabilities of about DM2.5bn.

The bankruptcy affects the group's headquarters in Bremen and three subsidiaries - Vulkan Schiffbau Verbund, Vulkan Werft and Schichau Seebockwerft - which together employ about 4,200 people.

There is a possibility a number of other shipbuilding subsidiaries, including Lloyd Werft and Geestemetalbau, could survive, according to another lawyer, handling the Vergleich for these companies.

Mr Wellensiek said he was also talking to a number of companies about the sale of Atlas Elektronik, the Bremer Vulkan electronics subsidiary.

Mr Udo Wagner, who took over as Bremer Vulkan chief executive in February, yesterday left the group, saying there was nothing more he could do now that bankruptcy proceedings had been opened.

An invitation to lend an ear to the talking banks

Investors have welcomed the greater openness of German financial institutions, writes Andrew Fisher

German banks used to be tight-lipped about their financial performance, revealing only the most basic figures. Now, however, they are becoming positively loquacious.

Terms such as shareholder value, return on equity and international accounting standards trip off executives' tongues as if they had been learnt from childhood.

Not that these concepts were previously unknown. It is just that the big German banks are taking to them with a wholeheartedness that would have been unheard of a few years ago.

As a result, analysts have been confronted with a welter of new data in the latest reporting season, in which profits were markedly better than in the lacklustre year of 1994. Deutsche Bank disclosed its hidden reserves; Dresdner Bank did the same, and added its property assets for good measure; Bayerische Vereinsbank gave a sectoral breakdown; and Commerzbank gave divisional profits. Banks also gave detailed information about risk provisions.

Deutsche Bank led the way among German banks by moving to international accounting standards (IAS). The idea is to give shareholders a greater insight into its financial performance, making it easier to raise money on international capital markets. "In our information society, there is demand for intelligent openness," said Mr Jürgen Krumnow, a director of the bank.

Deutsche Bank revealed hidden reserves of DM20bn (\$13bn), representing the difference between the book value of its myriad shareholdings in companies such as Daimler-Benz and Allianz insurance and their market value.

Mr Hilmar Kopfer, chairman, said the decision to move to IAS - which is less conservative than the creditor-oriented German system and allows closer comparison with foreign banks - fitted its global strategy. "The aim is full disclosure of our figures and targets."

Other banks are following, although not so enthusiastically or comprehensively. Dresdner Bank said its hidden reserves were DM9bn, or DM17bn if property and other holdings were included. Commerzbank declined to give this figure, but has provided more details of regional and divisional activities.

One disturbing aspect of the banks' performance last year was the weak domestic showing compared with the more dynamic trend abroad. With the economy slack and interest rate margins flat, continues to hamper profits growth in 1996.

Banks are cautious about the rest of the year. "All banks said *was so* that the first two months were very good," says Mrs Christine Winkler, banking analyst at Bayerische Hypothek- und Wechselbank. "But they warned against extrapolating from this for the whole year." In spite of the mixed picture

German banks are revealing their greater openness has been welcomed by financial markets. "I think investors respond well to having the extra information," says Mr John Leonard, banking analyst at Salomon Brothers in London. He also thinks banks' increased concentration on shareholder value - involving more effective use of assets, closer attention to costs and awareness of the need to earn better returns - is positive.

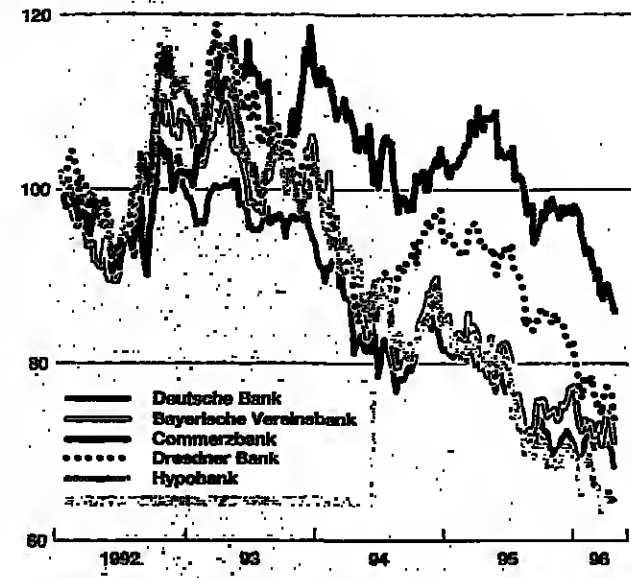
"We're talking about more than lip service here." This means more disclosure in difficult times as well as good, Mr Leonard adds. "Once they've taken the step of opening up, they'll have to stay open. So if things deteriorate they can't just paper this over."

German banks will certainly have to look to their laurels if the competitive threat highlighted by the attempt of CS Holding of Switzerland to merge with UBS becomes a reality. Although this failed, the prospect of a big new rival across the border sent a frisson through the German banking community.

The talk in German banking circles is of possible amalgamations or even takeovers moves by Swiss institutions in Germany. Commerzbank, the third-largest German bank, is regarded as a likely object of Swiss interest or as a possible candidate for a merger with one of its domestic competitors. At this stage, however, there is

German banks underperform

Share prices relative to the Dax index



How the big German banks fared last year

	Operating profit	Net income
	DM bn	%
Deutsche Bank	1.7	2.10
Dresdner Bank	1.99	2.21
Commerzbank	1.7	1.98
Bayerische Vereinsbank	1.38	0.58
Hypobank	1.2	0.68

*all in billions *on IAS international accounting standards basis Source: banks

more speculation than action. But the events in Switzerland showed the need for German banks to reinforce their competitive position. Spearheaded by Deutsche Bank they

have been moving into investment banking and asset management. Deutsche Bank plans to raise its spending on the investment banking side to DM700m this year as Deutsche

Morgan Grenfell's deal-making expertise and trading systems are developed further. Mr Kopfer intends investment banking eventually to provide a third of profits.

Banks are also striving to satisfy their domestic customers and trim their high domestic cost base by moving deeper into electronic banking. Vereinsbank has just opened its Advance Bank to appeal to customers wanting sophisticated cash management and mutual fund advice without the inconvenience of going into a branch.

Other big banks have also gone down the direct banking route, although Dresdner Bank is waiting to see how the market develops. "They certainly have a concept in the drawer and I am certain they will do it," says Mrs Winkler. "But they will wait until the time is ripe." Dresdner is concerned that the costs of acquiring new direct banking customers, who can easily switch loyalties, outweigh the advantages.

Whichever combination of electronic services, investment banking activities and corporate finance and treasury business German banks choose, costs will remain high. Banks are trying to rein back spending, weighing the benefits of innovation against the need for cost control.

By embracing the idea of shareholder value, they have committed themselves to keeping this balance as fine as possible. Investors will watch closely to see they do not trip.

Poland to cut coal production by 18%

By Christopher Bobinski in Warsaw

The Polish government yesterday approved a coal industry restructuring programme that is aimed at cutting output from last year's 135m tonnes to 110m tonnes in the year 2000 while increasing productivity by 25 per cent by the end of the century.

The plan, for what is now Europe's largest coal producer, also means the loss of 80,000 jobs in an industry that expects to be employing 174,000 people within five years. The move is to be underpinned by 4.5bn zlotys (\$1.8bn

worth of subsidies over this period, said Mr Klemens Scierka, the industry minister. The funds are to go on new equipment, unemployment payments and to cover the costs of up to 20 pit closures. The industry also hopes to cap its debt at its present 8bn zlotys.

Mr Jerzy Markowski, the deputy industry minister responsible for mining, is promising a return to profitability by 1998 for the industry, which is expected to report a 740m zlotys loss this year. At the same time the government has told the industry that domestic coal prices should rise no faster than inflation.

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International Bank for Reconstruction and Development
ECU 450,000,000
Floating Rate Notes due 2002

In accordance with the provisions of the Notes, notice is hereby given that the Rate of Interest for the three month period ending 30th July, 1996 has been fixed at 3.6606% per annum. The interest accruing for such three month period will be ECU 46.31 per ECU 5,000 Bearer Note, and ECU 526.15 per ECU 100.00 Bearer Note, on 30th July, 1996 against presentation of Coupon No. 17.

Union Bank of Switzerland
London Branch Agent Bank
26th April, 1996

ANZ Bank
Australia and New Zealand Banking Group Limited

ANZ Floating Rate Notes due 1997

Notice is hereby given that for the interest period 26th April, 1996 to 26th July, 1996, the notes will carry a Rate of Interest of 6.1075 per cent annum. The Amount of interest per £10,000 Note will be £15.34 and per £100,000 Note will be £153.42, payable on 26th July, 1996.

Listed on the Luxembourg Stock Exchange

Bankers Trust Company, London Agent Bank

Payment of Dividend

NOTICE IS GIVEN to shareholders that following a resolution passed at the Annual General Meeting of shareholders held on 30 April, 1996 a dividend for the year ended 31 December, 1995 of DM 13 per share of DM 50 par value will be paid as from 2 May, 1996 against delivery of Coupon No. 59 from shares of DM 50 or Coupon No. 10 from London Deposit Certificates of DM 5.

The dividend will be paid at the rate of exchange ruling on the day of payment.

Payments in respect of London Deposit Certificates will be made at the rate of exchange ruling on the day of receipt of dividend on the underlying shares deposited in Germany.

United Kingdom Income Tax will be deducted at the rate of 5% unless claims are accompanied by an affidavit.

German Capital Yield Tax deducted in excess of 15% is recoverable by United Kingdom residents, and the Company's United Kingdom Paying Agent will, upon request, provide holders with the appropriate forms for such recovery.

Coupons may be presented as from 2 May, 1996 to

S. G. Warburg & Co. Ltd.
Paying Agency
2 Finsbury Avenue
London EC2M 2PP

from whom appropriate claim forms can be obtained.

Hoechst

Hoechst Aktiengesellschaft
Frankfurt am Main, May 1996

NOTICE TO HOLDERS OF US\$40,000,000 4% BONDS DUE 2001 (the 'Bonds') of TUNG HO STEEL ENTERPRISE CORPORATION

(Incorporated as a company limited by shares in Taiwan, Republic of China) (the Company)

NOTICE IS HEREBY GIVEN to holders of the Bonds ('Bondholder') that any Bondholder may, in accordance with Condition (70) of the Bonds, by completing, signing and depositing, at the office of any Paying Agent specified below, a notice of redemption, in the form obtainable from a Paying Agent no earlier than May 27, 1996 and no later than June 14, 1996, require the Company to redeem on July 26, 1996 all or some only of the Bonds held by such Bondholder.

Any such notice of redemption will be irrevocable and will bind the Company, upon surrender by the Bondholder of the Bond or Bonds to which such notice relates at the specified office of the Paying Agent with which the notice of redemption was deposited, to redeem such Bonds at a redemption price of 121.501% of the principal amount of such Bonds together with accrued interest to the date of redemption.

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300 Street
London
WC2R 1BB

Payable Agents
Citibank (London) S.A.
86 Boulevard Godefr.
Duchesse Charlotte
L-1000 Luxembourg

Citibank, N.A.
Avenue de Tervuren 240
B-1180 Brussels
Belgium

Citibank (Schweiz) AG
Bahnhofstrasse 62
CH-8001 Zurich
Switzerland

May 2, 1996
By: Citicorp Trustee Company Limited **CITIBANK**

RPS
Residential Property Securities No.4 PLC

£290,000,000 Class A1 Notes
£180,000,000 Class A2 Notes

Mortgage Backed Floating Rate Notes due 2023

In accordance with the provisions of the Notes, notice is hereby given that for the three month period 30th April 1996 to 31st July 1996, the Class A1 Notes and Class A2 Notes will carry an interest rate of 6.22031% and 6.29531% per annum respectively. The interest payable per £100,000 Note will be £975.76 for the Class A1 Notes and £1,582.43 for the Class A2 Notes.

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COMPANIES AND FINANCE: UK

strive parts of afloat

had not been able to meet the conditions of the agreement which requires a company to pay back 25 per cent of what it owes within 15 months.

to cut coal on by 18%

BAT advances 10% helped by financial side

By Frederick Oram, Consumer Industries Editor

BAT Industries reported underlying first quarter profit growth of 10 per cent with its tobacco businesses performing slightly worse than forecast and its financial services marginally better.

Including a £34m gain on the sale of a Chilean food business, pre-tax profits rose 16 per cent to £600m. "This is a very steady start to 1996," said Mr Martin Broughton, chief executive.

Details of a previously announced reorganisation of its financial services arm, including Allied Dunbar, Eagle Star and Farmers, was likely to be merged in the second half, Mr Broughton said.

Financial services trading profits rose 2 per cent to £255m with general insurance, life and investment businesses slightly ahead. Good growth from Farmers in the US compensated for lower UK profits from Eagle Star (£31m, down 23 per cent) and Allied Dunbar (£46m, down 15 per cent).

because of bad weather and competition in car insurance. An £18m rise in investment returns to £73m, however, softened Eagle Star's profits fall.

Allied Dunbar's new business premiums rose 31 per cent as confidence among consumers and distributors continued to recover gradually. Total premium income was up 16 per cent at £402m.

Tobacco trading profits were up 9 per cent at £358m thanks to cigarette volumes rising 4 per cent and exports 6 per cent.

Profits at Brown & Williamson, its US subsidiary, were up 9 per cent to £156m but its market share slipped 1.5 per cent.

BAT said it was experiencing no adverse impact from tobacco litigation in the US. Its proposed sale of minor brands to Lorillard, however, has been blocked by US regulators.

Profits in Germany were hurt by increased marketing expenditure and falling volumes. Other, lower markets included Russia and Hungary.

On the positive side, Australia was beginning to recover, export volumes to China were up by £1bn and Asian markets generally grew well.

Advance limited by £5.9m restructuring charge Acquisitions behind Danka's rise to £53.9m

By Geoff Dyer

Acquisitions helped Danka Business Systems, the fast-growing office equipment supplier, to improve annual profits by 19 per cent from £45.4m to £53.9m (£81m). Turnover jumped 54 per cent to £793m (£516m), with about 50 acquisitions the group made over the year adding £183m to sales.

The shares, which rose strongly before the results, fell 5p to 79p, although the figures were in line with forecasts. Analysts said there had been some profit-taking.

Operating profits increased 38 per cent to £99.2m (£50.3m), £15.9m of the rise coming from acquisitions including October's £108m purchase of Netherlands-based Infotec.

Profits were held back by a £5.9m exceptional charge for restructuring recently acquired international businesses and a further £1.2m charge for the early repayment of borrowings.

Mr Mark Vaughan-Lee, chairman, said there was still considerable scope for further acquisitions which would add at least 15 per cent to annual turnover for the next three years. The group's market

PROFILE

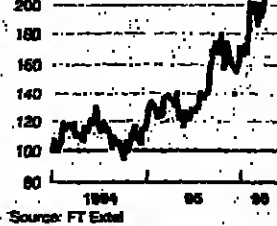
DANKA BUSINESS SYSTEMS

Market value: £1.70bn Share price: 99p 5p

	1992	1993	1994	1995	1996
Turnover	£115m	£198.3m	£247.2m	£515.7m	£793.0m
Pre-tax profit	£10.8m	£17.5m	£32.0m	£45.4m	£80.9m
Earnings per share*	6.7p	10.4p	11.8p	16.8p	21.5p
Dividend per share*	0.9p	1.1p	1.5p	1.8p	2.2p

*1992 & 93 figures restated to reflect 4:1 share split in July 1993

SHARE PRICE relative to the FT-SE-A All-Share Index



Source: FT Data



Mark Vaughan-Lee, chairman

share was only 6 per cent in the UK, 3-4 per cent in North America and 2 per cent in continental Europe, he said. The group has drawn \$100m (£73.8m) from a new \$400m borrowing facility negotiated in February. Due to goodwill

write-offs from acquisitions, it had net assets at the year end of £11.8m (£24.6m). Under US accounting rules, where goodwill is written off through the profit and loss account, net earnings increased 16 per cent to £45.2m (£39m).

Pet Plan sold to Cornhill for £32m

By Ralph Atkins, Insurance Correspondent

The two founders of Pet Plan, who each invested £250 in the animal health insurer 20 years ago, have sold the group for £32.5m (£49m).

Ms Patsy Bloom, the former secretary who founded Pet Plan, and business partner Mr David Simpson each realised about £16m as a result of the sale to Cornhill Insurance, the UK subsidiary of Allianz, the large German insurer.

The deal follows of two decades of galloping growth for Pet Plan, the UK's largest horse insurer, after Ms Bloom spotted an opportunity for providing protection against high veterinary bills.

Pet Plan has 400,000 policyholders, covering dogs and cats as well as horses. Its premium income is about £40m.

The sale came as Churchill, the UK telephone-based motor and household insurance arm of Swiss insurer Winterthur, and Direct Line, the telephone-based company, announced plans to enter the animal insurance market.

LEX COMMENT UK textiles

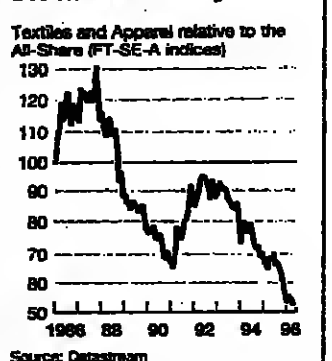
Yesterday's profits warnings from Courtaulds Textiles, its second in five months, was depressingly familiar. Over the past 10 years, investors in textiles have lost their shirts. The sector has underperformed the market average by nearly 60 per cent.

The market capitalisation of all 60-odd quoted textile stocks now adds up to only £1.6bn - the size of one middle ranking FT-SE 100 company. The reasons are not hard to find. Clothing consumption has declined as a proportion of disposable income, from 7 per cent in 1975 to less than 5 per cent now; and clothing prices have lagged behind inflation over the same period.

Competition from countries with lower labour costs has steadily intensified and last year the industry had to cope with unusually warm weather and wild swings in raw material prices.

That does not mean there are no textile companies in which it is worth investing. Those, like Dewhirst, Claremont and Sherwood, which have been fleet of foot in moving production offshore while cutting costs in the UK have consistently produced returns on capital of 20 per cent or better. But the sector's performance has been dragged down by the bigger companies - Coats Viyella, Courtaulds Textiles and Dawson International - which have been much slower to react. Dewhirst and Sherwood source nearly 50 per cent of their lingerie and garments from overseas. For Courtaulds, the comparable figure is 12 per cent and at Coats it is even lower. With the threat of a minimum wage and the gradual phasing out of quotas on imports, the big UK manufacturers have their work cut out for them.

UK textile industry



Source: Datastream

Courtaulds Textiles warns as US sales fall

By Motoko Rich

Shares in Courtaulds Textiles, the UK's second largest clothing and fabric manufacturer, plunged more than 10 per cent yesterday as the group warned of a severe drop in US sales would cause interim profits to fall "substantially below" last year's level.

Analysts cut their 1996 forecasts from £45m to £40m as the group, which suffered a 12 per cent fall in 1995 pre-tax profits to £40.4m, told its annual meeting that sales in the US were down 30 per cent year-on-year

because of destocking. The US business was likely to make a "small loss" in the first half.

The shares fell 45p to 373p. The group said lace markets in continental Europe were softer than expected.

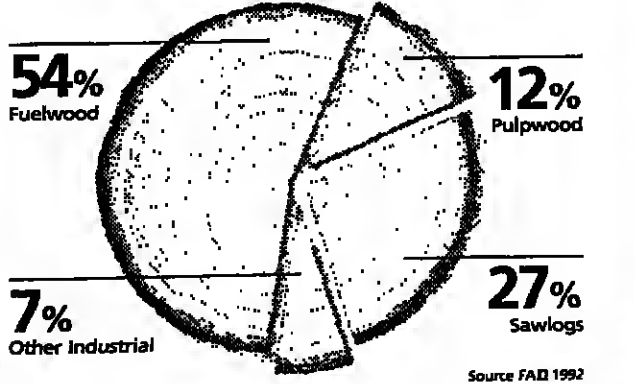
Margin pressure from raw material price rises in 1994 and 1995 were forcing it to follow rivals in raising the proportion of garments made outside the UK in the lower-wage economies of Asia and North Africa. Lex, Page 23.



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BOXMORE INTERNATIONAL PLC
(Registered in Northern Ireland No. 10529)
Introduction to the Official Lists by Credit Lyonnais Laing of the whole of the issued share capital of Boxmore International PLC

Authorised £4,725,000	Share capital ordinary shares of 10p each	Issued and fully paid £3,554,333.00
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Copies of the company listing document are available for collection during normal business hours for a period of two business days (from 26 April 1996) from the Company Secretary, the London Stock Exchange, London Stock Exchange Tower, Canal Street, London EC2A 4PU, from the Company's Financial Services Office, 25 Abchurch Lane, London EC4A 3DF, from the Company's Administrative Office of the Irish Stock Exchange, 28 Anglin Street, Dublin 2 and on any weekday up to and including 10 May 1996.

Credit Lyonnais Laing Broadwalk House 5 Abchurch Lane London EC4A 3DF	Goodbody Stockbrokers 122 Pembroke Road Ballsbridge Dublin 4	Boxmore International PLC Blaris Industrial Estate Blaris Road Lisburn Co. Antrim BT27 5QJ
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2 May 1996

Three months unaudited results to 31 March 1996

PRE-TAX PROFIT	£600m	+16%
EARNINGS PER SHARE	11.6p	+17%

- Pre-tax profit up by 10 per cent on an underlying basis, excluding the £34 million profit from the sale of the Group's food operations in Chile.
- Financial services profit up 2 per cent at £255 million. Good performance from Farmers and encouraging trend in UK life, but UK underwriting results deteriorated in the general business.
- Tobacco profit up 9 per cent at £358 million and volumes up by 4 per cent against last year's strong first quarter. Sales of both US and UK international brands once again made good headway.
- "In terms of the year as a whole, we anticipate making steady progress in 1996. This should enable us to continue to reward our shareholders with long term superior total returns."

Lord Cairns, Chairman

**REPUBLIC NEW YORK CORPORATION
SAFRA REPUBLIC HOLDINGS S.A.**

**Consolidated Statements of Condition
and Summaries of Results**

These statements and summaries represent the consolidated accounts of Republic New York Corporation and its wholly owned subsidiaries and of Safra Republic Holdings S.A. and its wholly owned subsidiaries. Republic New York Corporation owns 49.2% of Safra Republic Holdings S.A., which is accounted for by the equity method.

	REPUBLIC NEW YORK CORPORATION		SAFRA REPUBLIC HOLDINGS S.A.	
	March 31,		March 31,	
	1996	1995	1996	1995
(In thousands of US\$ except per share data)				
Assets				
Cash and due from banks	\$ 747,767	\$ 808,158	\$ 36,176	\$ 52,561
Interest-bearing deposits with banks	6,003,656	8,489,948	5,777,815	6,131,528
Precious metals	1,145,745	1,493,440	—	—
Investment securities	19,301,429	11,426,425	7,956,072	5,628,582
Trading account assets	3,580,673	4,310,232	139,025	215,515
Federal funds sold and securities purchased under resale agreements	890,924	2,399,383	—	—
Loans, net of unearned income	11,062,712	9,057,636	1,423,509	1,302,712
Allowance for possible loan losses	(339,209)	(318,138)	(129,537)	(137,321)
Loans, (net)	10,723,503	8,739,498	1,293,972	1,165,391
Other assets	4,750,562	4,681,131	473,443	392,953
Total assets	\$ 47,144,259	\$ 42,348,215	\$ 15,676,503	\$ 13,586,530
Liabilities				
Total deposits	\$ 29,106,509	\$ 23,301,948	\$ 12,077,857	\$ 10,310,536
Trading account liabilities	3,157,109	4,135,576	93,215	157,655
Short-term borrowings	4,053,311	4,458,989	1,367,562	1,046,829
Other liabilities	3,892,478	3,621,327	472,332	325,504
Long-term debt	1,499,037	1,767,119	175,000	430,000
Subordinated long-term debt and perpetual capital notes	2,406,463	2,406,279	—	—
Shareholders' Equity				
Cumulative preferred stock	575,000	672,500	—	—
Common stock and surplus, net of treasury shares	843,891	693,234	889,232	905,042
Retained earnings	1,702,801	1,533,943	601,076	526,639
Net unrealized appreciation (depreciation) on securities available for sale, net of taxes	(92,340)	(242,690)	229	(115,675)
Total shareholders' equity	3,029,352	2,656,977	1,490,537	1,316,006
Total liabilities and shareholders' equity	\$ 47,144,259	\$ 42,348,215	\$ 15,676,503	\$ 13,586,530
Book value per share	\$ 44.03	\$ 37.97	\$ 84.65	\$ 74.07
Client portfolio assets held in custody	\$ 7,369,467	\$ 5,679,515	\$ 7,369,467	\$ 5,679,515
Net income, for the three months ended	\$ 99,592	\$ 87,513	\$ 44,019	\$ 39,354
Net income per common share (primary)	\$ 1.64	\$ 1.48	\$ 2.50	\$ 2.22
Average common shares outstanding (primary)	56,021	52,302	17,608	17,753

Risk-Based Capital Ratios
As of March 31, 1996, Republic New York Corporation's risk-based core capital ratio was 13.40% (estimated) and total qualifying capital ratio was 22.90% (estimated). The ratios include the assets, risk-weighted in accordance with the requirements of the Federal Reserve Board specifically applied to Republic New York Corporation on a fully consolidated basis, and capital of Safra Republic Holdings S.A. Total consolidated assets under these requirements exceeded US\$ 60 billion and total consolidated capital, including minority interest and subordinated debt, exceeded US\$ 6 billion.

Republic New York Corporation
25th Avenue at 40th Street
New York, New York 10018
Safra Republic Holdings S.A.
25 Boulevard Royal
L-2449 Luxembourg
Banking Locations
Copenhagen, Geneva, Gibraltar, Guernsey, London, Lugano, Luxembourg, Milan, Monte Carlo, Moscow, Paris, Zurich, Beverly Hills, Cayman Islands, Los Angeles, Mexico City, Miami, Montreal, Nassau, New York, Toronto, Buenos Aires, Montevideo, Punta del Este, Rio de Janeiro, Santiago, Beirut, Beijing, Hong Kong, Jakarta, Manila, Perth, Singapore, Sydney, Taipei, Tokyo

COMPANIES AND FINANCE: UK

Shareholders protest about arms sales

Eggs fly as BAe wins change to voting rules

By Tim Burt

British Aerospace, the aircraft and defence equipment manufacturer, yesterday won approval for controversial plans to change its shareholder voting rules amid chaotic scenes as peace protesters disrupted its annual meeting.

Although the AGM ended with eggs being thrown at directors, minor scuffles and a bungled attempt to make a citizen's arrest of the board — the company claimed it had achieved its main aim of persuading shareholders to back its call for card votes at all future meetings.

BAe said the proposal — which gives it the authority to withhold a vote on the company's report and accounts — was supported by more than 90 per cent of the shareholders that voted.

The company pushed through the plan after giving undertakings to Pirc, the corporate governance consultancy, that it would continue to put its report and accounts to the vote "while that remained best practice".

Pirc expressed reservations about the proposals, but said it had advised its clients to back BAe's plan after the company promised to publish in advance any substantial shareholder amendments to its resolutions in future, and offered to restate an annual vote on directors' fees.

The corporate governance issues were overshadowed at yesterday's AGM by protests at the group's arms sales, particularly to Saudi Arabia and Indonesia.

Calls for BAe to abandon trade with such countries culminated when about half a dozen demonstrators tried to storm the directors' platform at London's Queen Elizabeth II conference centre.

As security staff ejected a number of protesters, another group set off rape alarms and eggs were thrown at the platform.

Earlier, Mr George Galloway, the Labour MP, accused Mr Dick Evans, BAe's chief executive, of taking part in a conspiracy that could have led to the kidnap or murder of Mr Mohammed Al-Masari, the London-based Saudi dissident.

He claimed that Mr Evans was implicated in a campaign against Mr Al-Masari by a leaked memo from Vickers, the defence group, which showed BAe's anxiety over the dissident's activities.

Mr Evans refused to comment directly on the Vickers memo. But he refuted Mr Galloway's allegations.

Bright start for forex on Internet

By Philip Gawth

A new service offering live foreign exchange prices on the Internet yesterday attracted about 700 inquiries on the first day of operation.

It is the first time that real time exchange rates have been available on the Internet.

Mr Peter Cruddas, managing director of Currency Management Corporation, which has launched the service with Information Internet, said: "We offer real time prices to anybody, anywhere in the world, 24 hours a day."

The service is free, in the belief that it will generate business for CMC, a market-maker in foreign exchange and bullion. The software can either be obtained on a disk or downloaded directly from the Internet. Initially, 12 currencies will be shown.

Within a few weeks, it will be possible for clients who have opened margin accounts with CMC to trade on screen.

The \$1.2 billion a day global foreign exchange market is dominated by wholesale participants — companies, investors, banks and speculators. High street retail business is only a small part. Mr Cruddas says his service should appeal to the intermediate market.

"There is a huge market worldwide for people who want to trade foreign exchange as a speculative or investment vehicle."

He believes small investors can use the Internet to start trading foreign exchange with the ease they trade stocks and bonds. In the US shares can be traded by exchanging e-mail messages. In the UK, the Electronic Share Information Group has plans to set up a share market on the Internet.

Unbroken growth takes Sage to expected £16m

By Alan Cane

Sage, the Newcastle-based accounting software house, performed to market expectations in the first half of the year, with strong growth in both revenues and profits.

The company's reputation for unbroken growth remained intact with pre-tax profits up 37 per cent to £18.1m (\$28m) for the six months to March 31. Revenues grew 42 per cent to £71.8m (£50.5), while earnings per share grew 33 per cent to 9.92p (7.46p). The interim dividend goes up 10 per cent to 0.88p a share (0.80p).

The shares fell 24p to 436p, but analysts attached little significance to the movement. Mr David Goldman, chairman, said the accounting software sector had remained stable and predictable despite substantial change in the PC business.

Sage is the UK's leading developer of business accounting software for personal computers. It has subsidiaries in France and in the US and is looking to expand further in both regions through acquisition.

France generates more revenue than the UK, £38.8m compared with £27.1m, but is only two thirds as profitable.

Margins were substantially improved at Ciel and Saari and a third French software house, Sybel, was acquired in November. Mr Goldman pointed out that in France the winter is the strongest trading period and that the French businesses could be expected to generate the greater part of their annual profits in the first half of the year.

The US operations made £1.9m on revenues of £10.9m, but are showing little growth.

BAe said the proposal — which gives it the authority to withhold a vote on the company's report and accounts — was supported by more than 90 per cent of the shareholders that voted.

Sir Alastair's tunnel vision

Andrew Taylor and Geoff Dyer on Eurotunnel's feared chairman

Negotiating with Sir Alastair Morton is like dealing with Tomás de Torquemada, the feared 15th century head of the Spanish Inquisition, according to construction companies and banks.

In an argument, the Eurotunnel co-chairman displays the same fanatical conviction, and being on the receiving end of one of his blunt verbal assaults has been likened to being put on the rack.

The mention of Sir Alastair's name still raises the hackles of contractors who deal with him during the tunnel's construction. It is no surprise, then, that some of Eurotunnel's bankers are reported to be fed up with his aggressive negotiating tactics and would like to see the back of him.

Bankers close to the negotiations say that the grumblings have been limited to a few institutions and that there has been no concerted campaign yet to unseat Sir Alastair.

Prompted by persistent speculation, National Westminster Bank denied on Tuesday that one of its senior bankers was leading an attempt to unseat Eurotunnel's co-chairman.

The issue is not a new one. With Sir Alastair due to stand down in October, several bankers have argued over the last year that they should be negotiating with a chairman who will be with the company in the long term.

A conspiracy theory among some bankers even suggests that Eurotunnel has been fanning the recent reports of disgruntled bankers, so that Sir Alastair appears as defender of shareholders' rights.

If anybody has been wrong-footed by the speculation it is unlikely to have been Sir Alastair, who has proved astute in his handling of the media since he joined Eurotunnel in 1987 to rescue the project.

He was always swift to remind construction companies that their contracts prohibited them from talking to press and television, as he fired off another salvo of public criticism highlighting their failure to build on time and to budget.

Now bankers have become irritated by what they regard as provocative public comments made by Sir Alastair, who last week bleak them for slow progress in debt renegotiations when announcing a £225m loss for 1995.

Yet even some of his fiercest critics admit that the project would never have been completed without him.

Senior management was in disarray when he arrived. The construction team was embryonic and there were few detailed designs for the project.

Institutional investors were threatening to snub vital share issues without which bank loans would have collapsed.

That these hurdles were overcome owed much to Sir



Alastair Morton: probably got best possible deal for shareholders

to have been considered by shareholders and banks to have got the best deal possible in the circumstances. Otherwise he would surely have been removed long ago.

None of the contractors have made much profit from the job. Most say they will do little better than break even.

Shareholders may continue to value Sir Alastair's tenacity and fighting ability as he now seeks to renegotiate the terms of some £8.4bn of bank debt. Most analysts believe that some form of debt-for-equity swap is inevitable, which would substantially dilute existing shareholders.

Those on the receiving end say Sir Alastair's negotiating style incorporates his legendary blunt speaking, a prodigious memory for minute detail and an over-weening confidence in his own arguments. He is also very articulate and can be charming.

He disconcerts many people. "He will fight extremely aggressively until a cause is lost and then will suddenly concede, and all will be warmth and sunshine again. You are left wondering what all the row was about," said one contractor.

The depth of any current discontent with Sir Alastair will be apparent when the company meets the instructing group of banks — the 25 biggest banks in the syndicate — on Friday.

Even if Sir Alastair survives the present whispering campaign, Eurotunnel has to find a successor by the autumn.

According to some banks, now that the tunnel is up and running, the company should adopt a less hostile approach to its business relationships. Sir Alastair's gun-ho attitude is no longer required, they say.

However, others disagree, arguing that Eurotunnel still needs a forceful personality at the helm.

"The debt rescheduling is only one of several key issues facing the group. Once that is sorted, it still has deal with the ferries and the railways."

JOHNNIC
JOHNNIES INDUSTRIAL CORPORATION LIMITED
(Incorporated in the Republic of South Africa - Reg. No. 01/00429/06)
(“Johnnic” or “the Company”)

RESULTS OF ELECTION TO RECEIVE AN INTERIM DIVIDEND INSTEAD OF THE CAPITALISATION AWARD AND AN ELECTION TO SUBSCRIBE FOR NEW SHARES

The right of election to receive an interim dividend instead of an award of capitalisation shares (“the Capitalisation Award”) and the right of election by those shareholders electing the dividend to apply the dividend in subscribing for new Johnnic shares (“the Subscription”) made to ordinary shareholders registered at the close of business on Friday, 22 March 1996 (“the record date”), closed at 14.00 on Friday, 26th April 1996. The weighted average traded price of Johnnic shares on The Johannesburg Stock Exchange for the three days ended 25 April 1996 was R55.26. Accordingly, the award of capitalisation shares and the subscription for new shares was determined as a ratio of 0.343829 new shares for each 100 shares held on the record date.

Elections to receive the interim dividend of 18 cents per share in respect of the year ending 30 June 1996 instead of the Capitalisation Award were received in respect of 86 742 679 shares. Accordingly, an interim dividend of 18 cents per share was declared on 7 March 1996 on 86 742 679 ordinary shares in respect of the year ending 30 June 1996. Elections to apply this dividend in subscribing for new shares in Johnnic were received in respect of 60 095 257 of these shares. An amount of R10 817 146.26 was therefore applied in terms of the Subscription. Accordingly, 426 980 new fully paid Johnnic ordinary shares of 10 cents each have been allotted in terms of the Capitalisation Award and the Subscription and the issued share capital of Johnnic has been increased in 151 582 940 ordinary shares.

The listing of 426 980 ordinary shares in Johnnic will commence on The Johannesburg Stock Exchange from the commencement of business today.

Share certificates and cheques in respect of the interim dividend and fractional payments will be posted in members today.

For and on behalf of the board
P F Retief (Chairman)
V G Bray (Chief Executive)
Johannesburg
2 May 1996

WOOLWICH
- Building Society -

£200,000,000
Floating rate notes due 1998

Notice is hereby given that the notes will bear interest at 6.17031% per annum from 30 April 1996 to 31 July 1996. Interest payable on 31 July 1996 will amount to £155.10 per £100,000 note and £1,551.01 per £1,000,000 note.

Agent: Morgan Guaranty Trust Company
JPMorgan

CENTRALE NUCLEAIRE EUROPEENNE
A NEUTRONS RAPIDES S.A. - NERSA
FRF 400,000,000
GUARANTEED FLOATING RATE NOTES DUE 1997
ISIN CODE: FR000818728

For the period April 30, 1996 to July 31, 1996 the new rate has been fixed at 5.92421% P.A.
Next payment date: July 31, 1996
Coupon rate: 28
Amount: FRF 200,000 for the denomination of FRF 20,000
FRF 1,000,000 for the denomination of FRF 100,000
THE PRINCIPAL PAYING AGENT
SOCIETE GENERALE BANK & TRUST LUXEMBOURG

The United Mexican States Floating Rate
Privatization Notes Due 2001

The applicable rate of interest for the period May 1, 1996, through and including July 31, 1996, to be paid on August 1, 1996, a period of 92 days, is 6.29688%. This rate is 131/10% above the offered rate for three-month deposits in U.S. Dollars which appeared on the display designated as the British Bankers Association's Interest Settlement Rate (S.A.48438%) as quoted on the Dow Jones/Telerep Monitor® as Teleterm Screen No. 3730 as at 11:00 A.M. (London Time) on April 29, 1996.

The above rate equates to an interest payment of U.S.D. 16.0920 per USD 1,000.00 in principal amount of Notes.

BANCO NACIONAL DE MEXICO, N.Y.
April 29, 1996

ENTE NAZIONALE PER L'ENERGIA ELETTRICA
LIT 500,000,000,000 FLOATING RATE NOTES
DUE 2000

In accordance with the provisions of the Notes, notice is hereby given as follows:

- Interest period: 30th April 1996 to 30th October 1996
- Interest payment date: 30th October 1996
- Interest rate: 8.75% per annum
- Coupon amounts: LIT 222,396 per Note of LIT 5,000,000
LIT 2,223,958 per Note of LIT 50,000,000

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Issued by the NEWSPRINT & NEWSPAPER INDUSTRY ENVIRONMENTAL ACTION GROUP

RESULTS

	Turnover (£m)	Pre-tax profit (£m)	EPS (p)	Current dividend (p)	Date of payment	Dividends corresponding dividend	Total for year	Total for year
MAY India	3 mths to Mar 31	5,956 (5,638)	600* (516)	11.8 (9.8)	-	-	-	24
Car's Milling	6 mths to Mar 31	42.4 (40.1)	1.53 (1.33)	14.4† (12.9)	2.5	June 5	2	8.5
Dunelm Retailers	Yr to Mar 31	79.3 (515.7)	33.94 (45.4)	19† (16.3)	1.08	July 25	0.9	2.16
Dunelm Estates	Yr to Dec 31	7.89 (5.07)	3.29† (2.1)	0.87 (0.33)	-	-	-	-
Hydro Int'l	Yr to Dec 31	13.9 (21.1)	1.52† (2.34)	7.72† (12.11)	-	-	-	-
Hydro Int'l	Yr to Dec 31	2.28 (5.34)	2.22† (4.40)	14.23† (3.87)	-	-	-	-
Jordan (Dunelm)	Yr to Dec 31	23.3 (23)	0.53 (3.24)	1.3 (19.4)	0.75	-	0.75	1.25
WMT Compelling	6 mths to Feb 29	8.25 (6.42)	2.57 (1.36)	13 (7.4)	2.7	July 1	1.8	6.2
Sage	6 mths to Mar 31	71.8 (50.6)	16.14 (11.7)	9.92 (7.46)	0.88	June 24	0.3	2.4
Shiloh	Yr to Mar 30	28.1 (27.1)	0.84† (0.944)	11.84 (4.95)	2.85	June 20	2.75	3.85

	NAV (p)	Dividends Shareholders (£m)	EPS (p)	Current dividend (p)	Date of payment	Corresponding dividend	Total for year	Total for year
Albany	Yr to Feb 29	167.8 (136.82)	0.565 (0.438)	5.84 (4.35)	3.25	July 4	2.9	4.8
Finlay's W'nd Flour	Yr to Mar 31	146 (-)	0.050 (-)	0.3 (-)	0.25	July 31	0.6	0.25
Floating Air Eastern	Yr to Mar 31	383 (342.1)	2.04 (2.46)	1.35 (1.62)	1.3	July 12	1.6	1.3
Murray Enterprises	6 mths to Mar 31	143.4 (117.7)	0.969 (0.234)	1.52 (0.97)	0.825	July 1	0.75	2.35

Earnings shown basic. Dividends shown net. Figures in brackets are for corresponding period. †After exceptional charge. ‡After exceptional credit. †On increased capital. *Comparative restated.

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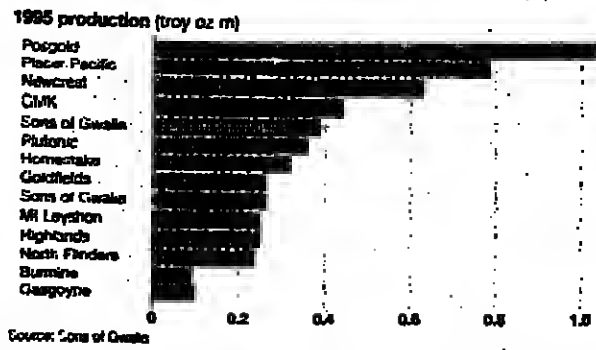
COMMODITIES AND AGRICULTURE

Mergers lift Sons of Gwalia into gold index

By Kenneth Gooding, Mining Correspondent

Only 14 months ago Sons of Gwalia was in production terms at least - one of the also-rans among Australian gold miners...

Australian gold producers



Ainsworth, SoG's chairman, says combining production, reserves and resources from six mines and three processing centres...

Reynolds Metals, the US aluminium group that was making a strategic withdrawal from Australian gold to concentrate on its core business...

ment - previously there was not enough room to slope the walls of the open pit at a conventional angle...

tors led by Mr Peter Lalor, the company's managing director, and his brother, Chris, now executive director responsible for legal and commercial affairs...

Indonesians to join iron ore and coal project in Australia

By Nikki Tait in Sydney

Indonesian investors - including Krakatau Steel, the large government-owned steel group - have agreed to join the South Australian Steel and Energy project...

the time, the companies involved said that they were talking to other potential investors, both domestic and overseas.

The aim is to build a demonstration plant over the next four months, to test the technical and commercial viability of Ausmelt's pig-iron making technology...

Amax's Alaskan and Russian projects face steep costs rises

By Kenneth Gooding

Amaz Gold of the US is facing steep cost increases at the two projects that it is counting on to put it among the world's big gold producers.

ounce range". Last year output from its four present mines totalled 238,000 ounces at a cash cost of \$326 an ounce.

the Kubaka project, with Russian interests owning the rest. Production, at an average annual rate of about 300,000 Troy ounces and a cash cost of under \$200 an ounce, is scheduled to start next year.

Traders show they care

By Laurie Morse in Chicago

In the first initiative of its kind, derivatives traders around the world will donate a portion of today's trading proceeds to the international relief agency, CARE...

worked together for the benefit of an international agency. In addition to Europe and the US, exchanges in Canada, Japan, Singapore, South Africa, and Australia are participating.

Australian meat reform planned

By Nikki Tait

Australia's federal government is set to up a taskforce to overhaul Australia's large but ailing meat industry.

and that the three statutory bodies that played a role in the sector - the Meat Industry Council, the Meat Research Corporation and the Australian Meat and Livestock Corporation - should be streamlined.

farm through to freight," he said. The taskforce is expected to report within a few months.

Pulp market slide reversed

By Robert Gibbens in Montreal

Many leading international forest products groups have predicted a US\$500 a tonne increase in northern softwood pulp transaction prices to about \$580, effective from June 1, reversing the fall from a peak \$1,000 last October to the current \$520.

Pacific and Stora are leading the move, say market analysts. A sudden increase in demand for top quality northern pulp has also extended to US southern pine pulp, for which \$540 is being asked for June delivery, up from \$480, they say.

to \$740 on average on April 22 under the leadership of International Paper and other companies have followed.

COMMODITIES PRICES

BASE METALS

Table with columns for metal type (Aluminum, Copper, Lead, Nickel, Zinc), price change, high, low, and open prices.

Precious Metals continued

Table with columns for metal type (Gold, Silver, Platinum, Palladium), price change, high, low, and open prices.

GRAINS AND OIL SEEDS

Table with columns for grain type (Wheat, Corn, Soybeans, Barley), price change, high, low, and open prices.

SOFTS

Table with columns for soft commodity type (Cocoa, Coffee, Sugar), price change, high, low, and open prices.

MEAT AND LIVESTOCK

Table with columns for livestock type (Live Cattle, Hog, Pork Bellies), price change, high, low, and open prices.

ENERGY

Table with columns for energy type (Crude Oil NYMEX, Crude Oil IPE, Heating Oil NYMEX, Gas Oil IPE), price change, high, low, and open prices.

HEATING OIL NYMEX

Table with columns for heating oil price change, high, low, and open prices.

POTATOES

Table with columns for potato price change, high, low, and open prices.

FRUIT

Table with columns for fruit price change, high, low, and open prices.

LONDON TRADED OPTIONS

Table with columns for option type (Aluminum, Copper, Gold, Silver, Soybean, Sugar), strike price, price, and puts.

PRECIOUS METALS

Table with columns for metal type (Gold, Silver, Platinum, Palladium), price change, high, low, and open prices.

UNLEADED GASOLINE

Table with columns for gasoline price change, high, low, and open prices.

FUTURES DATA

Table with columns for futures type (Nuts and Seeds, Wheat, Corn, Soybeans, Barley), price change, high, low, and open prices.

VOLUME DATA

Table with columns for volume type (CME, NYMEX, CBOT, ICE, OTC), volume, and price.

INDICES

Table with columns for index type (Reuters, CRB, S&P 500, Nikkei), price change, high, low, and open prices.

JOTTER PAD advertisement for HP Hewlett Packard, featuring a grid and the text 'The solution is HP Computer Systems.'

CROSSWORD

Crossword puzzle grid with clues and a solution key at the bottom right.

INTERNATIONAL CAPITAL MARKETS

Italian futures jump on rating news

By Sener Iskandar in London and Lisa Bransten in New York

Most European markets were closed yesterday for the May Day holiday. Italian BTP futures however showed a very strong performance on hopes that the country's sovereign ratings might be raised.

underlying fiscal structure". Moody's said it would place particular emphasis on "the medium-term trajectory of government finance".

In the longer term, Mr Kirt Shah, chief market strategist at Sanwa International, believes a pause in the recent convergence of European high-yielding markets towards German yield levels is likely.

GOVERNMENT BONDS

"The Italian market, for example, is now pricing future interest rate cuts that still have to be seen", he said.

The German market was closed, but in London the 10-year Bund future on 10-year bonds settled at 96.92, down 0.41. The contract showed weakness in early trading, reaching an intra-day low of 96.72, but recovered in the afternoon in line with US Treasuries.

Ms Sharda Persaud, German economist at San Paolo Bank in London, said that "although

market participants do not expect further rate cuts this year, funds still have upside potential". She believes the Bundesbank will start reducing the repo rate again, possibly early in June.

UK gilts traded sideways in moderate volumes. Political uncertainty weighed on the market, as traders were reluctant to take positions before today's local elections. Liffe's June long gilt future closed at 106 1/2, unchanged.

US Treasury prices gained in early trading as the figure for manufacturing activity from the National Association of Purchasing Management came in ahead of expectations, but below Tuesday's figure from purchasing managers in the Chicago area.

Near midday, the benchmark 30-year Treasury was 1/2 percent at 89 1/2, yielding 6.571 percent, while the two-year note was up 1/4 at 99 1/2, yielding 6.027 percent. The June Treasury bond future added 1/4 to 109 1/2. The yield curve that maps

the yield spread between two-year notes and 30-year bonds flattened by 2 basis points to 84 points on the suggestion that national manufacturing activity was not as strong as the Chicago figures suggested. A flattening yield curve is generally interpreted as a sign that fears about inflation are easing.

The NAPM put manufacturing activity at 50.1, the highest it has been since the spring of last year, but below the 52 level the Chicago association reported on Tuesday. Economists had forecast a NAPM figure of 46.

Yesterday's figure was just above the threshold of 50 that is considered a sign of economic expansion.

There was little market reaction to news that the Conference Board's index of leading economic indicators rose 0.2 percent, slightly below the 0.3 percent many economists had expected. Trading was comparatively light as investors awaited tomorrow's key figures on employment levels in April.

Offering by the Halifax sells out in hours

By Conner Middelmann

The UK's Halifax Building Society had the eurobond stage to itself yesterday, with Japan and most of Europe closed for national holidays.

Undistracted by other offerings, UK fund managers - especially long-term investors such as life insurers and pension funds - snapped up the £300m 25-year subordinated bond offering, which sold out only hours after launch, lead manager SBC Warburg said.

"Halifax is a very strong name in the sterling market, they're a very safe issuer, and the pricing was fair," said a syndicate official at another house.

The bonds were priced at a spread of 100 basis points over gilts, which narrowed slightly after they were freed to trade. The pricing was tighter than comparable secondary subordinated bank bonds, but dealers said that was justified by the borrower's rarity value and strong credit standing.

It was the Halifax's first dated subordinated bond issue ranking as Lower Tier 2 capital since February 1992.

While new deals are likely to be thin on the ground this week, the market is preparing for more in coming weeks.

The Korean Development Bank is to hold European roadshows next week for a global bond, said to be around \$700m of five-year or 10-year bonds via CS First Boston and Lehman Brothers.

London next week to select underwriters for the country's first eurobond, expected this summer. Israel is looking to raise \$200m to \$250m.

Mexican global bond swap draws a mixed response

By Lisa Bransten in New York and Conner Middelmann in London

Mexico's offer to exchange up to \$2.5bn in outstanding Brady debt for 30-year global bonds drew a mixed response from global investors yesterday.

Mexico agreed to exchange \$1.75bn in outstanding Brady debt for a 30-year dollar-denominated global bond with a yield of 6.69 basis points over the US long bond. That is less than the \$2.5bn maximum Mexico offered to exchange, and the yield was at the high end of expected pricing.

The global bonds receive interest of about 164 basis points more than Mexico's par Bradys at the close on Tuesday, but lose the 30-year zero-coupon US Treasury bonds that collateralised the Bradys in case of default, so the offer was viewed as a key test of demand for pure Mexican risk.

"It's not a failure, but it's not an outstanding success," said Ms Ingrid Iverson, emerging markets debt strategist at UBS Securities in New York. "It doesn't suggest that there is a huge pool of investors out there desperate to buy pure Latin 30-year risk."

Some, however, took as a favourable sign the fact that Mexico managed to sell even a more modest amount of long-term debt just 15 months after the botched devaluation of the peso sent it into financial crisis.

"The fact that they managed to get \$1.75bn of pure Mexican 30-year debt into the market is a very positive statement in itself - there's no way that would have been possible six months ago," one syndicate official said. He reported some buying by emerging market fund managers and US banks.

Mr Ali Nayagi, head of emerging market debt at Citibank Global Asset Management, said he was encouraged by the fact

that a relatively large proportion of Bradys were exchanged by holders other than the Mexican government.

While the smaller than expected size and the high yield may cause the issues to weaken in the short-term, he said, in the long run it should be good for Mexico because it extends the duration of its debt, establishes a 30-year benchmark and frees up some of the collateral for other uses.

The new bonds immediately traded down to 92.25 from their offer price of 92.98, and then settled at about 92.60, but some attributed the decline to hedge funds that bought into the deal to "flip" them quickly in the secondary market.

Mr Martin Werner, director general of public credit in the Mexican finance ministry, said he was pleased with the auction, but that Mexico would not follow this deal with another exchange this year.

Egyptian offshore fund planned

By Randa Khatib

Although the Egyptian stock exchange is the second largest Middle Eastern market open to foreign investors it has so far attracted little interest from institutional buyers.

HSBC James Capel is looking to change this with the launch of the first offshore closed-end fund to invest in Egyptian equities.

HSBC is attempting to raise between \$50m and \$100m from institutional investors in Europe, the US and the Middle East. The Egypt Investment Company will be listed on the London Stock Exchange and will be managed by Concord National, a joint venture between Concord Group, a US-based investment manager, and the National Bank of

Egypt. A total of \$20m is said to have already been committed by local investors.

The Egypt investment strategy is driven by the government's stated determination to speed up a privatisation programme that has been mired in bureaucracy for years.

Pressed by the International Monetary Fund, the newly appointed government issued in February a list of 80 companies worth over \$4bn to be privatised this year.

Concord officials admit this target may be too ambitious and perhaps no more than 40 per cent of the companies will be sold, but insist that progress on the privatisation front is likely to be made at last.

Stocks on the Egyptian exchange trade at a cheap seven times earnings on average. But out of the 700 companies listed on the exchange, only 100 actually trade while 30 stocks represent over 50 per cent of the total \$8bn in market capitalisation.

The market was down 19 per cent in 1995 and has lost over 5 per cent this year. But Concord officials say the market is unlikely to drop further.

They also play down concerns about Egypt's political risk - highlighted last month when Islamic militants gunned down 17 tourists outside a Cairo hotel.

The investment managers say that compared with the general volatility of the Middle East, Egypt is politically stable, with the National Democratic Party having consolidated its rule in the December 1995 parliamentary elections.

Catastrophe insurance loss bonds pioneered

By Richard Lapper

Benfield Ellinger, a London-based insurance broker, has linked up with AIG Combined Risks (AIGCR), the investment banking arm of American International Group, to place a portfolio of catastrophe insurance-linked bonds with a UK fund manager.

The fund manager is investing an amount understood to be around \$10m with an offshore special purpose vehicle. This vehicle will in turn sell a loss warranty reinsurance contract to a reinsurance company.

The policy is triggered if catastrophic insurance losses in any one of five geographic areas - the US, Japan, Austral-

asia, the Caribbean and western Europe - exceed a level stipulated in the contract.

Losses will be measured against the industry loss indices of Property Claims Services and Sigma.

All of the bond's principal, as well as the interest generated by it, is at risk in the event of a loss.

"This is a ground-breaking product which accesses a new source of capital for the reinsurance market," said Mr Matthew Harding, chairman of Benfield.

Mr Diego Wauters, president and chief executive of AIGCR, described the deal as a "pioneering transaction for the insurance and reinsurance markets".

Saint Gobain doubles credit facility to \$1bn

By Antonis Sharpe

Saint Gobain, the French glass and construction materials group, has signed a \$1bn seven-year syndicated credit facility, double the amount it was originally seeking.

Demand from banks wanting to be in the deal was such that \$1.4bn was raised in general syndication, almost three times the initial target, but the company decided to limit the size of the facility to \$1bn.

Including the three arrangers - ABN-Amro, Citicombank and Deutsche Bank - 28 other banks participated in the loan, which will be used for general financing needs and will partly replace the company's existing bilateral lines.

The interest rate on the loan in years one to five is 12.5 basis points over Libor, rising to 15 basis points in the final two years.

Merck, the German pharmaceuticals company, is seeking to raise DM1bn in the syndicated loan market, via Deutsche Bank and Dresdner Bank. The seven-year facility will be launched into general syndication in the next few weeks.

NatWest Markets and Banco Santander have arranged a Pnt17.1bn credit facility with a final maturity of 2010 to fund the construction and sale of 10 vessels to be built by the Spanish shipyard Astilleros de Huelva. The buyers of the vessels are Milrose and Maribay, two Irish companies.

WORLD BOND PRICES

Table with columns: Country, Coupon, Price, Days' change, Yield, Week 92, Month 92. Rows include Australia, Austria, Belgium, Canada, Denmark, France, Germany, Italy, Japan, Netherlands, Portugal, Spain, Sweden, UK Gilts, US Treasury, and SCU (French Govt).

BUND FUTURES OPTIONS (LFFE) DM250,000 points of 100%

Table with columns: Strike, Price, Jun, Jul, Aug, Sep, Oct, Nov, Dec. Rows include 9800, 9700, 9600, 9500.

ITALY NATIONAL GOVT. BOND (BTP) FUTURES (LFFE) Lire 200m 100ths of 100%

Table with columns: Strike, Price, Jun, Jul, Aug, Sep, Oct, Nov, Dec. Rows include 114.27, 114.02, 113.35.

ITALY GOVT. BOND (BTP) FUTURES OPTIONS (LFFE) Lire 200m 100ths of 100%

Table with columns: Strike, Price, Jun, Jul, Aug, Sep, Oct, Nov, Dec. Rows include 114.00, 113.80, 113.60.

SPAIN NATIONAL SPANISH BOND FUTURES (MEFF) Apr 30

Table with columns: Open, Settle, Price, Change, High, Low, Est. vol., Open Int. Rows include 96.80, 96.83, 96.24.

UK NATIONAL UK GILT FUTURES (LFFE) £50,000 32nds of 100%

Table with columns: Open, Settle, Price, Change, High, Low, Est. vol., Open Int. Rows include 100.00, 100.03, 100.01.

LONG GILT FUTURES OPTIONS (LFFE) £50,000 64ths of 100%

Table with columns: Strike, Price, Jun, Jul, Aug, Sep, Oct, Nov, Dec. Rows include 100, 100.5, 101, 101.5.

EURO BOND FUTURES (MATIF) ECU100,000

Table with columns: Open, Settle, Price, Change, High, Low, Est. vol., Open Int. Rows include 91.86, 91.76, 91.14.

US TREASURY BOND FUTURES (CBT) \$100,000 32nds of 100%

Table with columns: Open, Settle, Price, Change, High, Low, Est. vol., Open Int. Rows include 109.04, 109.07, 109.07.

NOTIONAL LONG TERM JAPANESE GOVT. BOND FUTURES (LFFE) ¥100m 100ths of 100%

Table with columns: Open, Close, Price, Change, High, Low, Est. vol., Open Int. Rows include 117.84, 118.09, 118.09.

FT-ACTUARIES FIXED INTEREST INDICES

Table with columns: Price Index, UK Gilts, 10y, 20y, 30y, 10y, 20y, 30y. Rows include 122.05, 145.22, 180.24.

FT FIXED INTEREST INDICES

Table with columns: Govt. Secs. (UK), Fixed Interest, 10y, 20y, 30y. Rows include 92.47, 92.57, 92.76.

GILT EDGED ACTIVITY INDICES

Table with columns: Gilt Edged, 10y, 20y, 30y. Rows include 96.2, 96.4, 97.6.

US INTEREST RATES

Table with columns: Rate, 3m, 6m, 9m, 12m, 1y, 2y, 3y, 5y, 7y, 10y. Rows include 5.11, 5.11, 5.11.

BOND FUTURES AND OPTIONS

FRANCE NATIONAL FRENCH BOND FUTURES (MATIF) FF400,000 (Apr 30)

Table with columns: Open, Settle, Price, Change, High, Low, Est. vol., Open Int. Rows include 128.56, 128.58, 128.74.

LONG TERM FRENCH BOND FUTURES (MATIF) FF400,000 (Apr 30)

Table with columns: Open, Settle, Price, Change, High, Low, Est. vol., Open Int. Rows include 122.10, 122.10, 122.24.

GERMANY NATIONAL GERMAN BOND FUTURES (LFFE) DM250,000 100ths of 100%

Table with columns: Open, Settle, Price, Change, High, Low, Est. vol., Open Int. Rows include 95.93, 95.82, 95.09.

UK GILTS PRICES

Table with columns: Name, Yield, Price, Change, High, Low. Rows include 2 1/2% 2005-06, 3% 2005-06.

Other Fixed Interest

Table with columns: Name, Yield, Price, Change, High, Low. Rows include Aalen Dev 100m USD, Aalen Dev 200m USD.

FT/ISMA INTERNATIONAL BOND SERVICE

Large table with columns: Issued, Bid, Offer, Chg., Yield, Issued, Bid, Offer, Chg., Yield. Rows include US DOLLAR STRATEGIES, EURO STRATEGIES, OTHER STRATEGIES.

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2 PENSION FUND INVESTMENT

■ **Passive managers** by Philip Coggan

More funds will succumb

Index funds can win more pension fund clients before natural limits restrict growth

It is a testimonial to the marketing skills of active managers that they have been able to hold their own in the face of competition from indexers.

The evidence would suggest that pension fund trustees should be using index managers more than they do. In UK equities, active managers have underperformed the FT-SE All-Share Index in eight of the last 10 years, although in three of those years (including 1995) the underperformance was only 0.1 per cent.

In world markets, figures from performance measurement company WM show that managers lagged the index in six of the last 10 years, notably in 1995 when they were heavily underweight in the fast-growing US market.

However the heavy weighting that UK managers tend to take in the Pacific region means that over the last five years as a whole they have actually outperformed the world index, thanks particularly to a good performance in 1993, when they beat the index by 11.3 per cent.

The record of active managers in recent years has improved, perhaps because there has been a tendency for funds to concentrate in the hands of the best of them.

There may also be a sense in which trustees think they would be "giving up" on trying to get the best returns for their fund if they opted for passive management.

The proportion of the UK pension fund market run by index fund managers is around 15-20 per cent, compared with around 30 per cent in the US.

There is undoubtedly a natural limit on the proportion of funds that can be indexed. The intellectual argument in favour of indexing is based on efficient market theory: the

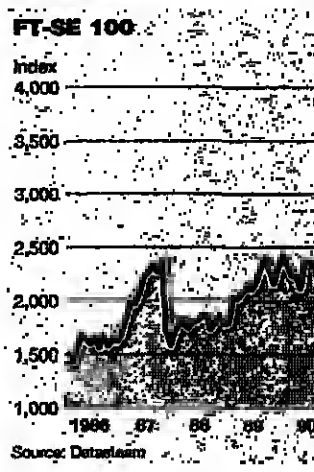
thesis that the price of a commodity reflects all available news and that only future events, which by definition are unknown, can move prices.

To make the market efficient, there need to be plenty of active managers trawling the market for bargains. Once indexation predominates, markets would, by definition become inefficient, giving active managers scope to outperform.

Many investors reject the intellectual case for efficient markets, and it certainly has been possible to find anomalies - such as the outperformance of small companies or high-yielding stocks - which cast doubt on the theory. It is also difficult to deny, in the face of records such as Mr Warren Buffett's, that a few individuals have been consistently able to demonstrate an ability to beat the markets.

While it may be possible for investment managers to beat the market, it is not so easy for trustees to identify them in advance. "The justification for index-tracking is that, while skill does exist in the City, it cannot be reliably pre-identified," says Mr John Shuttleworth, actuarial partner at Coopers & Lybrand.

Index-tracking also has the advantage that its costs are always likely to be lower than those of active management. Active managers must recruit highly-paid staff and cover their expenses as they travel



Source: Datastream



Korea: its inefficient markets creates opportunities for indexers

the country, or the world, interviewing companies. Second, an active manager will incur heavy transaction costs as he or she switches between stocks in search of a winning formula. According to Mr Shuttleworth, the average active manager does about five times as many transactions as an indexer.

Add in the fact that trustees can be assured of a decent performance from a tracker (they will not be top of the pack but, far more importantly, they will not be bottom either) and it seems likely that indexing will make further gains.

That would certainly seem to be the view of Barclays de Zoete Wedd Investment Management, which last year took over Wells Fargo Nikko Investment Advisors to create a group with some \$250bn under management, including \$200bn in indexed form.

Other managers noted for their strong bottom-up philosophies are having to move closer to the indexed route. Fidelity, the US fund management giant, continues to insist that stockpicking drives returns, but assures its institutional clients that its 10 largest positions will be no greater than 25 per cent of the group's

"active money." The latter is defined as the difference between a stock's index weight and the actual weight in Fidelity's portfolio. Fidelity's aim is to provide superior returns while reducing volatility.

In the international context, the issue of index-tracking is tied up with a debate about the relative merits of balanced and specialist management. A fund could either match the world index, with accordingly heavy weightings relative to its peers in Japan and the US, or make its own asset allocation decisions, and use, where possible, index funds specific to each country.

But asset allocators do not have that impressive a track record, meaning that the gains from matching the indices can be lost by incorrect country selection. The answer to this problem may lie in some sort of mechanical rebalancing.

Passive managers are also at a disadvantage in inefficient stock markets, notably those of emerging countries. In Korea, for example, local investors are fixated on the par value of stocks and avoid highly-priced shares; as a result low-priced shares tend to have high price-earnings ratios and vice versa. Such markets create greater opportunities for active managers to beat the index.

The debate is certain to rage on for a while. And it is of far more than academic interest. Coopers & Lybrand's Mr Shuttleworth says that indexed active managers by 0.5 per cent in the UK in the last 10 years. "This may look small, but if maintained indefinitely by a company whose actuary says an annual employer's contribution of 10 per cent of payroll is needed, the 10 per cent will fall to 8.5 per cent. At the profit and loss level, for many companies 1.5 per cent of payroll is serious money."

■ **Quantitative techniques** by Barry Riley

UK resists quant invasion

The conservatism of pension fund trustees has limited the growth of these methods

Though the majority of quantitatively-managed portfolios are run passively - which means that they track various stock market indices - there are strong incentives for quant managers to get into the active management business, where fees can be much higher.

This is big business in the US, where pension plan sponsors are much readier to allocate money to non-traditional investment managers than in Europe. But in the UK, in particular, quantitative firms find it very difficult to persuade trustees that they should do something a little differently from their peers. "In some ways the UK is the toughest of the lot," says Ms Jennie Paterson of Barr Rosenberg European Management.

One quant firm, Panagora, which operates out of Boston and London, is currently trying to tackle this marketing blockage head on by launching a balanced product in the UK, called Structured Balanced Strategy.

"People are not interested in strategies that are not explainable," says Mr Anthony Simpson, Panagora's head of marketing. The product offers familiarity, in that it is benchmarked, for example to the WM 2000 asset allocation. At the same time it aims to use quantitative techniques to add value both on a top-down asset allocation basis and at the bottom-up stockpicking level.

What exactly do quants do, apart from giving their firms peculiar names that usually begin with P or Q? The definitions are becoming increasingly blurred, because these days many mainstream fund managers use quantitative techniques, at the very least to measure and constrain their risks against their benchmark.

In principle quants rely on purely statistical or systematic methods of choosing between individual stocks or asset classes. Typically they rely on powerful computers to crunch the numbers in databases and use optimisation techniques to



Jennie Paterson: offering active products to UK pension funds

choose the best markets to be in, based on past volatilities and correlations.

Another approach is to analyse the factors which are driving the market, as London firm Quorum does, closely tracking measures such as price-to-book or other value indicators across a number of European stock markets.

High-powered US-based investment gurus are now focusing on the potential of the European pension fund market place. The investment management firm set up by Californian one-time academic Mr Barr Rosenberg, for instance, has recently picked up a £50m active UK equity account for the Kingfisher retail group. It has also won mandates in the Netherlands and Scandinavia.

Rosenberg has developed active equity products for leading markets such as the US, Japan and the UK, and also seeks global mandates. Although performance went through a bad patch a few years ago it claims its value-based formula is delivering outperformance of between 2 and 4 per cent a year, with the UK at present near the top of that range.

The Nobel Prize-winning Modern Portfolio Theory pioneer Mr Harry Markowitz has also developed active equity products for the US, Japan and the UK. He is working in partnership with Japan's Daiwa Securities, and has a marketing link with Commercial Union in the UK where, its products are marketed under

the Cudos name.

Mr Markowitz admitted to experiencing problems in making his model work for the UK, largely because the data was not as good as in the US or Japan. Following its launch last year, the design of the Cudos UK fund design has been tweaked with the aim of rolling out a repetition of the fourth quarter underperformance. This was a consequence of underexposure to Glaxo (due to a ceiling on holdings in individual stocks) and a lack of exposure to investment trusts.

So Cudos UK underperformed the market by about 1 per cent in 1995, entirely because of the fourth quarter. Its objective remains to deliver the All-Share return plus 1.5 per cent, over rolling three-year periods, net of fees.

Other London quant firms have focused on a variety of products. Pareto Partners, for instance, has taken on a lot of currency overlay work for US pension plans, which involves controlling currency risks separately to those from underlying investments, and ideally adding extra return.

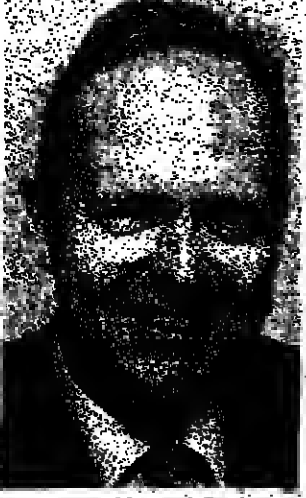
US pension plans are also interested in so-called tactical asset allocation (TAA), in which quant techniques are used to optimise allocations to equities and bonds globally.

There are plenty of tempting possibilities here. For instance, one firm, First Quadrant, has done interesting work to show that simple rebalancing to a benchmark can add significant value over an extended period. But a recent investigation by the performance consultants World Markets, covering 23 fund management houses, mostly from the US, suggests that TAA's benefits - if they exist - are hard to pin down.

The quantitative investment management side of the Barclays Bank group has now become the world's biggest quant manager through the takeover last year of the investment side of Wells Fargo. Although BZW Asset Management, as the combination is now called, is best known as the dominant manager of index funds, worth some \$180bn at the end of last year, it also runs some \$70bn in funds with active strategies, mostly using forms of TAA.

The number two in the field in the US, State Street, is also well established in London, and has been promoting emerging market strategies where it relies on a combination of asset allocation judgments and local index funds.

So far many of these active quant firms have gained most of their business by selling global products to the US or specialist funds to the Continent. The big opportunities in the very conservative UK pension fund market remain largely untapped.



Colin McLatchie: disciplined tools are needed for asset allocation

Simulations indicate that the firm's systems can deliver reliable top quartile performance, after fees, on a three-year rolling basis. Unlike conventional UK balanced managers, who rely almost entirely on stock selection to outperform, Panagora aims to add value through asset allocation too.

"Other people don't have any disciplined tools to make the asset allocation decisions," claims Mr Colin McLatchie, the firm's chief operating officer in Europe.

But the history of quant shows that all too often it can be a tough task to turn simulated outperformance into the reality of long-term client satisfaction - and doubly difficult in the field of UK company pension schemes.

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Trustees: by Norma Cohen

Boards have to clarify their aims

Pension scheme trustees will have to state their investment objectives

The Pensions Act, which takes effect next April, is a watershed in many respects. Its most revolutionary aspect is the way it codifies the duties of scheme trustees, and in particular, those duties relating to investment.

It requires trustees to set out a statement of their investment policies including details of expected returns and risks.

This is a tall order. "The guidance in the Act on the contents of the statement is not 100 per cent clear," according to actuaries William M Mercer and Co.

What remains ambiguous is just how far trustees must go towards setting out their expectations of returns and risks.

In the past, Mercer notes, trustees have had problems putting specific investment objectives into practice, particularly when they have asked an investment manager to follow a strategy similar to that of the "average" pension scheme. Such a strategy has often produced a stream of

returns differing little from those of a scheme's peer group but which may not have matched the demands for cash generated by its liabilities.

"The whole area of investment is a bit of a grey one," says Mr Trevor Crowter, partner in the actuarial practice of accountants KPMG Peat Marwick. "Certainly trustees will have to set out their aims and objectives, but so far, the wording is so vague that no one knows what that means."

Further clarification is due this summer from the Department of Social Security, but even then, it will be up to trustees to interpret the rules.

One question which remains unclear is whether trustees will be required to conduct an

asset/liability study to gauge the extent to which their investments are likely to produce the cash needed to pay pensions. While it is generally accepted that equities outperform gilts over the long term, gilts are the investments carrying the surest guarantee of steady future cash flow. And the increasing maturing of the average UK pension scheme suggests that trustees must re-allocate their investment portfolios more heavily in favour of gilts in order to reduce risk.

Data from WM Company shows that currently most schemes have done little to match their assets and liabilities. A review of 154 schemes showed only six whose investments in "real" assets - equities and property - were less than 70 per cent of the total.

These included a group of "super mature" funds which conventional wisdom says should have been heavily invested in gilts.

The Act does not ask trustees to run a totally risk-free investment policy. They must simply understand the risks their strategy poses.

Mr Gordon Bogot, director of research and consultancy at performance measurers WM Company, says that trustees of a well-funded scheme who expect their employer to be around for a long time to come can justify an investment strategy designed to maximise returns rather than reduce risk. And that, he says, means running a portfolio heavily weighted in equities, even when current and deferred pensioners outnumber contributing members.

After all, investments in UK equities over the past 10 years have delivered the best long-term results, two percentage points a year ahead of the next best asset class, overseas equities and bonds.

However, Mr Bogot concedes that this strategy might require the company to add cash occasionally in a year when investments provide insufficient returns to pay pen-

sions. "It might be in the long term interests of the company to take the risk of having to put cash in periodically," Mr Bogot says.

The difficulty with this, he notes, is that the Pensions Act, which is based on the work of a committee chaired by Professor Roy Goode, gives the responsibility for setting investment strategy to the trustees. But it is the company, the ultimate provider of the needed cash, which must really make the decision about how much risk to take on. If trustees make one assessment of risk and the employer another, confrontations are likely to ensue, Mr Bogot notes.

The new Act poses other troubling questions for trustees on the investment front, he adds. For instance, if trustees decide that it is really appropriate to alter the asset mix, when should that shift occur?

"Do you want to move into bonds when interest rates are at their lowest and then get killed when they rise again?" Mr Bogot asks. And if they make the wrong decision, could trustees be said to have failed in their fiduciary responsibilities to scheme members?

It is easy to imagine the sorts of discussions that trustees will be having with their advisers in trying to come to

grips with their legal obligations on thorny questions such as these.

Indeed consultants say that one by-product of the Act will be demand for more and better trustee training. Mr Roger Urwin, senior partner in the investment practice at actuaries Watson Wyatt and Co says that while most trustees mean well, they too often do not have the skills required of them under the new law.

"Trustees' attitudes are right, their integrity is of a

very high order," he said, speaking at a WM Company forum. "But their skills and backgrounds are just not up to running a big, complex financial institution like a pension fund."

And when it comes to setting an investment strategy which is inconsistent with the consensus of a peer group of pension funds, many trustees will be reluctant to act, he says.

There are other investment duties the new Act delegates to trustees; the selection and



The dispossessed: thefts from Maxwell Group pension funds were the main trigger for the new legislation

appointment of fund managers, custodians, and other advisers.

But while these formalised responsibilities for trustees spell new headaches, they also are likely to lead to better run schemes, consultants say. "We believe that to get the best out of the Statement of Investment Principles (required under the Act), schemes really need to address their objectives," consultants at William M Mercer say. "This is a very good thing to do, with or without the Statement."

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Custody: by Norma Cohen

Funds wake up to the dangers

High investment costs and tougher client briefs are prompting a shake-up

For pension fund trustees, the custody of scheme assets had historically been, at best, a dead housekeeping issue. That is, until the late Mr Robert Maxwell disappeared overboard five years ago.

The Maxwell affair alerted trustees to the possibility that there are more ways to lose money than simply picking the wrong asset mix. Assets, they learned, can go missing overnight if one is not careful, and by all accounts the level of vigilance has increased.

Since Mr Maxwell's death there has been a sea change in what trustees expect from their custodian. Not only do they require gold-plated guarantees on the safety and security of assets, but they want to know at every minute of the day where their securities are, what yields they are returning and where their cash is.

The growing demands placed on custodians by pension scheme trustees and administrators has hastened one of the most fundamental changes in the industry. The need to invest constantly in information technology has caused a significant number of providers to decide that they no longer want to be in the business at all.

Over the past year, US-based JP Morgan sold its global custody business to Bank of New York - a move also made by Bank of America. National Westminster Bank sold its custody business to Lloyds Bank, while Prudential, the UK's largest life insurer, abandoned its in-house custody operations. UK fund managers Henderson Administration and Barings Asset Management have done likewise.

One of the forces driving the consolidation, consultants say, is the new Pensions Act which specifically gives trustees the responsibility for selecting a custodian.

Pension funds were badly shaken by the collapse last year of Barings, the UK merchant bank whose operations included a substantial fund management division and a custody business. Although securities held for clients by the custody business were safe from claims by creditors, the client cash had been placed on deposit at Barings banking division. Had the buyers of Barings, ING Bank, not agreed to make good the liabilities, over £600m in client cash could have been at risk.

Mr Robert Kay, partner at Global Securities Consulting Services, which specialises in custody, says that if anything, the Barings collapse has hastened the tendency for pension schemes to choose a custodian separate from its fund manager. "The trend is only one way," Mr Kay says. "The first and main reason is risk management."

Clients want to ensure, first, that the custodian of their cash is financially sound. Second, he says, they want to know that their investments are dispersed among several banks so that even if one becomes insolvent, they have only lost a relatively small portion of their assets.

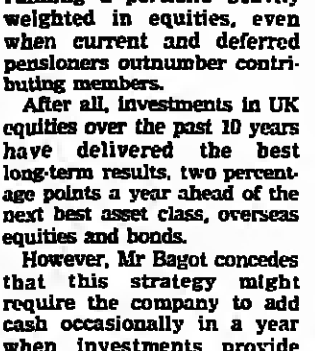
Beyond narrow concerns about the custody of cash, the collapse of Barings has made trustees focus on the financial strength of their custodian.

One of Barings Asset Management's first acts after it was acquired by ING was to announce that it would abandon its in-house custody arm and select a "custodian of choice" for its clients and negotiate a bank contract which would get them better terms than if they found a new custodian individually.

Barings' move, consultants predict, is likely to be followed by many UK fund managers who have been offering their own custody service. Indeed, SG Warburg, the former parent of fund Mercury Asset Management is understood to be talking to prospective buyers for the MAM custody and fund administration business it now owns.



Goode: proposed new rules



Bogot: equities holdings unlimited



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*Source: The WM Company.

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4 PENSION FUND INVESTMENT

■ Defined contribution schemes: by Jonathan Guthrie

Risk-averse employers warm to money purchase plans

The patience of managers with money purchase expertise could be rewarded soon

From July 1 new members of Barclays Bank's pension plan will pay their contributions into a defined contribution (DC) scheme. This means the bank's old defined benefit (DB) scheme will shrink in years to come, as its 67,000 members retire and its £7.7bn in assets are paid out in pensions.

Investment managers predict that many large companies will follow Barclays' lead. As its name implies, only the contribution level of a DC scheme is fixed in advance. The size of the member's pension depends on how well his or her individual investment fund performs. The employer does not have to pay higher contributions if performance is poor, as is the case with a DB scheme, in which members' pensions are set as a proportion of their final salary.

Moreover sponsors of DC, or money purchase, plans will not have to meet the cost of complying with complicated rules on solvency that will be imposed on DB schemes by the Pensions Act.

An erosion of job security in the UK labour market means that employers can switch to DC provision without seriously damaging relations with existing employees or competitiveness in attracting new ones. According to a recent survey by third-party administrators Hartshead Solway, more than half of schemes considering changing their benefits structure thought they might introduce money purchase plans.

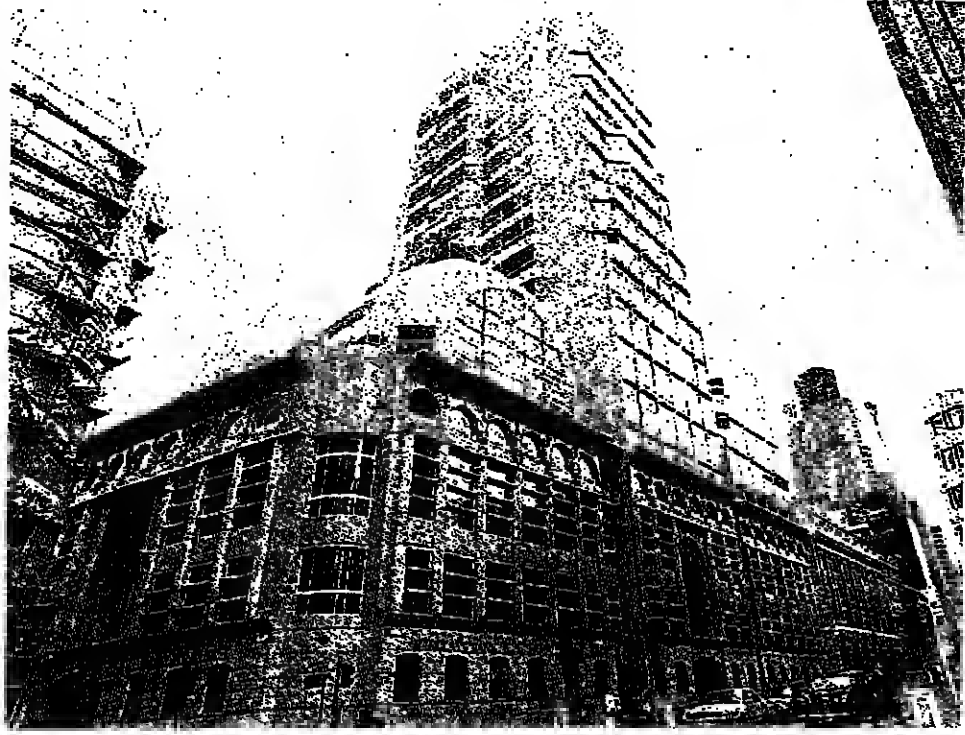
Companies that have set up DC plans recently include WH Smith, Standard Chartered, Pearson - the owner of the Financial Times - and Legal & General.

DC plans have always been popular with smaller employers. Insurers such as Prudential, Sun Alliance and Scottish Equitable have traditionally serviced this market, providing investment management and scheme administration in a single package.

City investment managers have rushed to set up DC investment services with the aim of winning some of the new business emerging from big employers. This group of providers includes Mercury Asset Management (MAM), Gartmore, Schroders, Flemings, Fidelity and Morgau Grenfell.

At present these latecomers are like surfers paddling around on a calm sea, waiting for a big wave to pick them up and carry them forward. The assets of DC plans are small compared to those held by DB schemes - just £10bn out of a total pension fund market of £900bn, according to one estimate. But they should build up rapidly as the swelling stream of contribution payments is boosted by stock market growth.

Mr Philip Beale, director of institutional marketing of Fleming Investment Management (FIM), says: "What is attractive about the market is its growth potential. We were expecting that it could grow to between £20bn to £40bn in the next 10-15 years. The Pensions Act has made us revise that upwards to £50bn to £100bn." Those investment managers who, like FIM, are not inte-



Barclays Bank is just the latest big British employer to set up a DC plan to provide benefits for new entrants

grated departments within a large insurer, are estimated to manage little more than £1bn in DC scheme assets. But they are catching up rapidly. According to the magazine Pensions Management, in the year ending in March 1995 Mercury Life - an insurer wholly-owned by MAM - received premiums of £165m from DC schemes, just £10m less than the Prudential. The previous year it took only £77m against the Prudential's £150m.

Traditional investment managers have an important advantage over insurers in the battle to manage the assets of big companies' DC plans: a

cosy relationship with benefits consultants. Cynics say the consultants are unlikely to recommend an insurer offering investment and administration as a package. They can make more money by advising the client to use a specialist investment manager, and supplying the administration themselves.

According to Mr Alex Welland, managing director of Gartmore Pooled Pensions: "With final salary schemes the focus of customer service is on the trustee, but with money purchase it is on the member as well." The latter is often given the chance to choose

how their fund is invested. Freedom of choice means freedom to make the wrong choice. An example would be a member approaching retirement who gambles his fund on volatile Far Eastern markets. According to received wisdom he should really invest in low-growth, low-risk securities, such as gilts, to lock in long-term capital gains.

To avoid blunders such as these many providers allow trustees to ban members from using their riskiest investment funds. Some investment managers and insurers also offer their corporate clients DC schemes

that incorporate a "lifestyle" plan. These switch members' funds from high to low-risk investments as they age, assuring they do not want to make their own investment choices. Younger members' funds buy assets that deliver long-term growth at the price of short-term volatility, such as equities. Older members' pots are invested much more heavily in gilts.

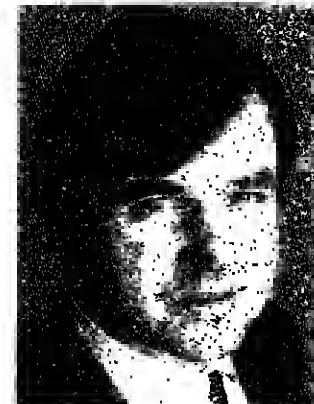
Lifestyle plans are designed to benefit members who do not want to make their own investment choices - usually a majority of around 80 per cent, according to Mr Beale of FIM, and in theory they should produce higher fund values at retirement than the investment methodology adopted by those insurers who put all money from DC schemes into managed and with-profits funds. The gilts weightings of these pooled investments - up to 25 per cent for some with-profits funds - can prove too high for younger members, but too low for older counterparts.

Investment managers take a risk-averse attitude to investing DC assets. This reflects the objectives of their corporate clients, who have little to gain from a high-risk, high-reward strategy. There is no scope for contributions holidays or a return of surplus. And if investments perform badly, the resulting cut in pensions income will make the scheme's trustees and sponsor hugely unpopular with members.

DC plans' investments are harder to administer than those of DB schemes. This partly explains why investment managers charge 20 basis points more for managing a DC plan than a DB scheme. Managers have to keep track



Alex Welland: the member in a client as well as the trustee



Philip Beale: Pensions Act has boosted the market's potential

of a separate pot of assets for each member, who sometimes takes a proprietorial interest in how it is handled. For example members and trustees expect contributions to be invested far more quickly than peers with final salary schemes. Making tax reclaim an investment returns is a bugbear for investment managers who place their clients' DC funds in their own range of unit trusts. Those integrated into or affiliated with an insurer have an advantage here, because they can pay back tax into their tax-exempt funds gross. In co-ordinated unit trusts firms have to split reclaims laboriously between the tax-exempt investors who use their ranges of unit trusts. This is one reason why some investment managers, including MAM, have set up life offices as a springboard for entering the money purchase market.

■ Corporate governance: by John Kingman

City's reluctant activists

The voting power of investment managers has placed them centre stage

Thanks to this year's hard-fought battle for Forte, Britain now has something rather unusual: a well-known investment manager. Because Mercury Asset Management held big stakes in both Granada and Forte, the bid shone a powerful spotlight both on MAM and its vice-chairman, Ms Carol Galley.

It also fuelled the debate over investment managers' power and the ways in which it is exercised. Institutional investors are increasingly seen as the front line in the battle over corporate governance. The reason is simple. The voting powers that investment managers' substantial shareholdings confer represent the most effective potential check on directors' freedom to run companies as they please. As concerns about corporate governance have grown, so the potential for institutional investors to make companies change their policies has been increasingly stressed.

Inevitably, some have found the investment managers wanting. Sometimes, as in the Granada bid for Forte, they have been criticised for wielding too much influence. Conversely, they have been attacked for not bothering to exercise the power they have - selling their stakes in companies they have lost confidence in, rather than taking the trouble to address deficiencies of strategy or management.

Investment managers say their job is to maximise the return on their funds, not to police the wider public interest: anything else would be inconsistent with their duties to the pensioners, for whose benefit the funds are managed. But others worry that if institutional investors do not bother to press for change, nobody will. The Cadbury report, for instance, stressed the importance of investment managers seeing it as their responsibility as owners, and in the interests of those whose money they are investing, to bring about changes in companies where necessary, rather than selling their shares. Sometimes, of course, they



Sir Adrian Cadbury: the report from his committee initiated the debate

have little choice: where institutions hold big stakes, selling them can be difficult, giving them a powerful incentive to work with companies to improve shareholder returns. Both the Greenbury and Cadbury reports produced codes of practice which companies were expected to follow. Neither expected pressure from institutional investors, on its own, to provide a solution to the corporate governance problem.

This is not only because institutions can choose to sell the securities they hold. It is also because issues of public concern may not worry investment managers. For instance, they may have no difficulty with a company they invest in paying a big salary to an executive who has delivered big returns, even though public opinion is against it.

On the other hand, they cannot afford to ignore "fat cat" salaries altogether. It is, for instance, in their interest as investors to encourage as close a link as possible between remuneration and shareholder returns. Moreover public storms over pay can damage shareholders' interests: the furor over the large salary commanded by British Gas's chief executive Mr Cedric Brown, for instance, almost certainly hit the British Gas share price.

In practice, where investment managers have published corporate governance policy statements, they have tended to shy away from executive pay, the most highly charged of all corporate governance issues, leaving it to company remuneration committees to handle. Trustees and investment managers are becoming more



Cedric Brown: row over his pay

active on other issues. Certainly they are voting at companies' annual general meetings more than they used to.

The trade body of the pension fund industry, the National Association of Pension Funds, believes they should do so, and even offers a "voting issues service" assessing companies against a range of corporate governance criteria and highlighting contentious resolutions requiring shareholder approval.

The NAPF also encourages pension fund trustees to develop voting guidelines within which, if necessary, delegated voting authority can be granted to investment managers. This is the approach taken, for instance, by the rail pension fund. RailPen's trustees have issued a set of voting guidelines for their investment managers to follow, but expect "political, outstanding or worrisome" issues to be referred back to them. Several investment managers have meanwhile produced their own guidelines, explain-

ing how they exercise the voting powers they wield on behalf of trustees.

This approach fulfils a recommendation of the Cadbury report that institutions should publish a statement of their policy on voting rights. But it has been far from universally taken up.

One reason is that many doubt whether guidelines can fully capture what corporate governance is about. Mr Hugh Stevenson, chairman of MAM, says: "A formal checklist inevitably overlooks some of the things that matter most to us, such as the quality of non-executive directors, or that corporate strategy is right."

Mr Derek Fowler, chairman of the RailPen trustees, agrees: "What is more important to our stakeholders - the pensioners - is whether the judgment being exercised by company directors is in shareholders' interests."

As RailPen's corporate governance paper puts it: "Ensuring boards are in control of the business, act effectively and have a sound strategy is more likely to achieve higher shareholder returns than 'hygiene' factors."

British investment managers have traditionally exerted discreet pressure on companies behind closed doors. Some believe a more direct approach is now needed. For instance Calpers, America's largest public pension fund, has suggested that British institutional investors should jointly set up an institute to improve management at underperforming companies.

So far proposals like these have tended to receive a cool reception: many British investment managers simply prefer to work quietly. The debate over trustees' and fund managers' methods is evolving fast. Once guidelines are published, pensioners - on whose behalf they have, after all, been established - will be able to comment on them. They will also be able to hold trustees and investment managers to account, asking how far they have complied with the guidelines in particular cases.

Mr Fowler says: "It won't be long before pensioners start asking 'how did you let this company get away with such-and-such for so long?' Once you get that, corporate governance will really come to life."

■ Investment consultants: by Jonathan Guthrie

A few big firms dominate

Scope for cross-selling gives large actuaries an advantage in this business

The need to diversify drove British actuarial firms into investment consultancy. There was little scope for growth in their core business, actuarial valuations of pension funds. Extracting more income from clients meant selling them a new product.

That product - advice to pension fund trustees on selecting investment managers - has been highly successful. The investment consultancy division of Watson Wyatt, the benefits adviser whose clients include the pension funds of 40 of the FTSE 100 index's members, now has 50 consultants chalking up billable hours, compared with a handful at its start eight years ago.

The unit, along with competing departments at firms such as William M Mercer, Sedgwick Noble Lowndes, Hymans Robertson, Bacon & Woodrow and Alexander Clay, is busy developing a range of other services.

The most successful of these is the asset/liability study, a comparison of a fund's potential future income with its likely outgoings. Demand is brisk from maturing funds - those who face paying out more money to pensioners than they receive from investments and contributions.

The introduction of a minimum funding requirement (MFR) via the Pensions Act has also boosted custom. This measure, which will be implemented from 1997 onward, will encourage funds to match their investments and their financial obligations more closely.

Mr Paul Haines, investment director at Sedgwick Noble Lowndes, says: "The issue for investment consultants is out calculating the fund's current position in relation to the MFR, but whether investments will perform well enough to avoid breaching the guidelines in future."

Most UK investment consultancies have a particular advantage in undertaking asset/liability studies. Unlike their US counterparts, which are often stand-alone operations, the majority are integrated into actuarial firms. This gives them instant access to data and methodologies useful in understanding their clients' liabilities. Meanwhile a fall in the cost of computing power has allowed them to increase the sophistication of the service they can offer.

Investment consultants aim to diversify geographically as well as in terms of products. They are establishing new outposts around the world. Their aim is to provide research and advice informed by local knowledge, but which conforms to consistent global standards. There are three main prizes at stake. The first is to advise clients based in one country on

Reported adviserships on manager searches

Consultant	1995		1992-1995	
	No of mandates	Value \$bn	No of mandates	Value \$bn
Watson Wyatt	25	8.6	123	28.0
William M Mercer	23	3.9	69	7.7
Hymans Robertson	9	2.1	31	6.3
Bacon & Woodrow	7	0.6	23	3.5

Source: Global Money Management

performance and manager selection in another, as investment becomes a more international business. The second is to sell a consultancy service to multinationals that covers all their pension funds in countries around the world. The third is to establish an early presence in countries that are setting up funded plans for the first time.

The UK arm of William M Mercer is playing a lead role in spearheading the US-based benefits consultant's push into investment consulting in Europe. In May 1995 it took over the investment consulting firm Klein Haneveld in the Netherlands, a country with many big pension funds. This year it set up an investment consulting business in Spain.

Mr Robert Baker, deputy head of William M Mercer Investment Consulting, says his firm is taking on an increasing amount of cross-border work for multinationals, adding: "Often our role is to tell the client what is going on at the periphery."

Mercer's most obvious international rival was forced in 1995 when US benefit consultant Wyatt took an effective 10

per cent shareholding in UK counterpart R Watson. Both companies adopted the name Watson Wyatt (WW) in a combination which executives insist on referring to as an "alliance", but which for operational purposes looks like a merger.

The firm's investment practice is busy standardising research from offices around the world. It is also rejigging its management structure, moving the former head of its US office, Mr Mark Scott, to the UK to take up the newly-created post of head of international investment consulting.

His immediate boss, Mr Roger Urwin, head of investment consulting worldwide, has built up a strong UK practice, capitalising on referrals from the firm's actuaries, who specialise in advising big schemes. As a result WW has a dominant position in running large investment manager selection exercises. For example, Equitas, the reinsurer of old claims against Lloyd's of London, recently appointed WW as its adviser in choosing managers to run funds that could be worth up to £100m.

According to the newsletter



Baker: more multinational work

Global Money Management, last year WW advised on 25 publicly-reported mandate contests, worth \$8.6bn in funds under management. William M Mercer's, its nearest competitor, had 23 publicly-reported adviserships, on funds worth just \$1.6bn.

Many mandate contests go unreported and consultancy sources say WW actually advised on 29 selection exercises for funds worth \$16.7bn. WW's dominance mirrors that of a few pension fund investment manager performance measures. CAPS says 20 per cent of them invest 82 per cent of the money held in balanced segregated accounts. Privately, investment managers who win few mandates claim WW only recommends a handful of big investment managers for possible selection.

Ms Jane Welsh, a senior investment consultant at WW admits: "Inevitably if you're looking at placing very large portfolios you're restricted in the number of firms that can deal with them." But she says that her department takes a far broader view of the market than criticisms suggest - during 1995 it researched 100 investment managers and included 59 on short lists.

A consultancy, Cymet Management Services, has recently been set up to help investment managers sell their services to investment consultants and pension funds. Co-founder Mr Charles Anderson says: "There are well over 200 investment managers in the UK and a long list for a selection exercise is unlikely to include more than ten... Cymet feels that some remarkably strong investment managers are not being brought to the attention of the consultants."

Pension funds sometimes fire investment managers whose performance falls. But they do not sack their investment consultants for recommending them in the first place. Watson's Mr Welsh explains: "They understand why we've put particular managers forward, but ultimately it's their decision."

The tenacity of the business, like any consultancy work, is that the adviser advises, but the client bears the risk.

Schroders is one of the UK's top investment

Managers

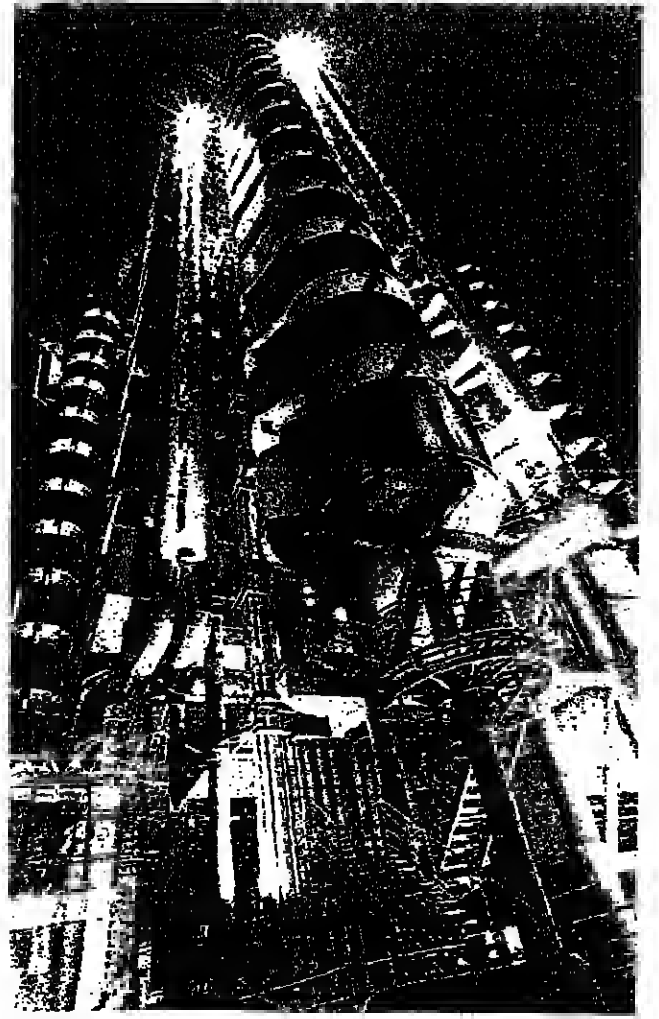
with £38 billion of assets under management for UK pension funds.

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Equitas, reinsurer to Lloyd's, is running a huge manager selection

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Information Technology

Wednesday May 1 / Thursday May 2 1996

Businesses fail to halt 'Ram raiders'

A spiralling crime wave is causing growing concern among law enforcement authorities, insurers and the business community, writes Paul Taylor

Armed thieves and so-called "Ram-raiders" have helped turn chip theft into a multi-billion-dollar industry worldwide, and computer "hacking" and virus attacks are on the increase.

Computer theft is already the fastest-growing crime in the UK. Nevertheless, studies by independent consultants such as KPMG and Ernst & Young show that physical and other security is often lax and businesses are still doing too little to protect themselves from attack. In some cases, the consultants warn, this puts the very survival of businesses at risk.

While the personal computer and computer network have become important business tools, they have also emerged at the heart of a spiralling crime wave which is causing growing concern among law enforcement authorities, insurers and business representatives.

Dependence on computing power carries obvious risks. According to a Loughborough University study, 70 per cent of businesses that suffer computer failure of one kind or another will be out of business within 18 months.

Similarly, the latest Information Security Breaches Study by the National Computing Centre which covers more than 7,000 separate incidents, notes that almost 20 per cent of reported security breaches had a "significant or serious impact on the organisation", and in 30 per cent of thefts and 16 per cent of all incidents it took more than a week to restore operations.

Nevertheless, a recent study by Ernst & Young revealed that although IT security was a big concern for managements in Britain, more than a third had no security policy.

A similar study by KPMG showed that 98 per cent of organisations in the UK and Ireland failed to implement the BS 7799 "Code of Practice for Information Security Management." The majority of organisations also fail to meet the three key controls affecting physical security

which, the firm points out, "are particularly important in the light of recent terrorist incidents."

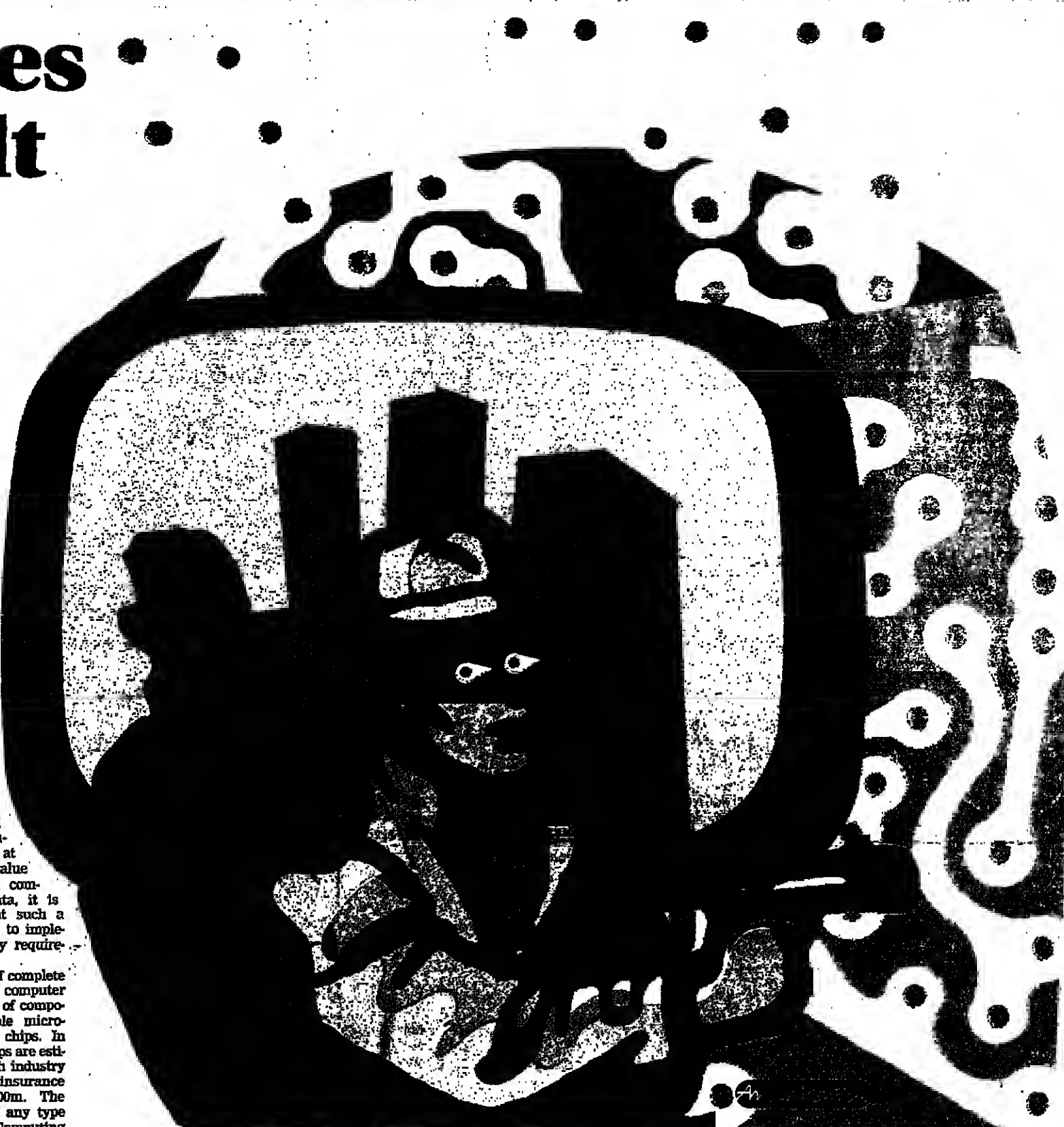
Specifically, three-quarters of the companies surveyed do not have a designated security officer, 77 per cent have no formal procedure for reporting security incidents, and 67 per cent do not have a business continuity plan.

Commenting on the findings, Mr Michael Bacon, director of information security services at KPMG said: "Given the value to organisations of both computer equipment and data, it is extremely disturbing that such a large number have failed to implement these basic security requirements."

Rather than the theft of complete machines, most physical computer crime involves the taking of components, especially valuable microprocessors and memory chips. In Britain alone, thefts of chips are estimated to have cost British industry £1bn last year, with insurance claims approaching £200m. The largest single incident of any type recorded by the National Computing Centre involved a theft which cost an estimated £750,000.

Often the crimes are blamed on organised gangs, some armed, who have discovered that personal computers, chips and other components are easy to carry, difficult to trace and worth more than their weight in gold. The average thief can easily stash more than £200,000 of stolen computer chips in a rucksack. In the US, where chip theft - including armed hold-ups at Silicon valley semiconductor plants - is rife, one insurance company estimates the problem will cost companies \$200bn worldwide by 2000.

Virtually no organisations are safe from the crime wave although the majority of premises attacked have been commercial. Targets have



ranged from multinational manufacturers to national newspapers, public utilities and local government offices.

The average computer is likely to have about \$500-worth of chips inside it, and is often sitting on a desk secured by only two screws in the computer case. Meanwhile, most chips are unmarked and even if stolen chips are recovered, it is usually impossible for police to discover where they have been stolen from.

One way to make the tracing of computer chips easier would be for manufacturers to label them with pin numbers. Intel, the world's leading microprocessor manufacturer, does label batches of its Pentium processors with identification numbers

and IBM has started numbering its memory and processor chips.

However, most chip manufacturers argue that labelling individual chips with unique numbers is impractical and would be too costly.

To combat physical computer crime, a wide variety of protection measures have been developed.

Physical restraints, such as hard-wire cases and tamper-proof bolts are used to attach the machine to a desktop or floor but are unsightly and can impair the users' productivity.

Alternatives include plug-in card motion detectors and electronic tagging systems for components. These are usually based on wireless radio transponders which can trigger local

and/or remote alarms or even spray indelible dye over the components.

Other security products include invisible identity tags which show up under ultra-violet light, microdots, smoke bombs and chemical mixtures designed to produce a unique "fingerprint" which helps identify the components. However, some computer manufacturers have suggested that some of these products might invalidate warranties.

Several companies have also developed software programmes which monitor networked computers and their components.

Some of the new anti-theft products are on display at Infosec 96, the UK's first big IT security exhibition, at London Olympia this week.

"Computer crime is now rife and spreading at epidemic levels," claim the show's organisers. More than 100 companies are exhibiting their latest IT security products, and the organisers have prepared seven fact sheets dealing with security "hot topics" such as encryption, disaster recovery and virus protection.

Indeed, while physical computer crime steals most of the headlines, computer crime also encompasses other activities such as hacking and virus attacks.

In the UK, 80 per cent of organisations have suffered an IT security breach, according to data prepared by Ernst & Young and the Department of Trade and Industry.

Experts in the IT security sector

estimate that breaches cost UK companies more than £1.2bn a year with incidents rising at 12 per cent a year. Computer networks are particularly at risk.

There are an estimated 6,500 computer viruses in circulation with between 150 and 200 new viruses being written each month, mostly by young and male computer wizards.

Some virus authors have even formed "cyberpunk" gangs dedicated to causing damage and mischief. For example, one gang is called Vlad (Virus Labs and Distribution) while another is called Phat-cm-Skism (Smart Kids Into Sick Methods).

While writing a computer virus is not an offence, damaging data is. Recently, the "Black Baron" was jailed for 18 months for causing more than \$500,000 of damage with his SMELG viruses.

In North America, a recent report on computer viruses conducted by the US-based National Computer Security Association, suggested computer viruses will cost North American businesses between \$5bn and \$6bn this year, up from just \$1bn last year.

The NCSA study, which involved 300 large organisations, discovered that 98 per cent had experienced computer virus attacks - and at least half of these involved the macro virus which affects Microsoft Word documents.

"The losses stem from costs related to finding and eliminating these viruses, as well as computer down-time," said Mr Peter Tippett, NCSA president.

"At least half of the increase in losses has been caused by the new macro virus which is spreading faster than any other type of virus as it can travel by e-mail and can prove difficult to detect because most users do not scan documents for viruses."

Since the start of the year, most of the leading virus protection software vendors including McAfee have launched new products capable of detecting and deleting macro viruses.

However no amount of "firewall" security or anti-virus software will prevent attacks from within. Most studies suggest that 60 per cent of computer abuse is caused by insiders.

And virus attacks and hackers are not the only IT threats to businesses. According to Bickel Rothenberg chartered accountants, as much as £2bn a year is being wasted by British companies because of computer misuse and "time-wasting including 'surfing' the Internet". Some 10m people in the UK now use computers in their work and if they only waste three minutes a day each then this alone costs British industry £1bn a year.

While most of the losses to businesses are due to computer misuse, Mr Mark Ryan, Bickel Rothenberg systems manager, said: "It varies from surfing the Net, to unauthorised computer use like the copying of software and more users than a licence permits, to poor documentation, data thefts, amendments to processing and data and computer damage."

Mr Ryan believes that much of the loss is recoverable if business puts simple controls and management procedures in place. But if they do not, he warns, "the problem will grow and cost a great deal more."

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Chris Galvin, president and chief executive of Motorola - Interview by Paul Taylor

Ready for the next surprises

In order to help stimulate innovation, Motorola holds annual technology 'road map' meetings where business groups look at technologies 10 years ahead

From the outset, Motorola's founders, Mr Paul Galvin and his brother Joe, proved adept at creating and exploiting new markets for the group's technology - a strategy which has helped the Chicago-based electronics group grow into a business with worldwide sales last year of \$27bn.

Today, Motorola is the world's largest supplier of wireless communication equipment, its semiconductor business leads the world in many of the markets it serves and it is frequently cited as one of the best run and most innovative companies in the world. "We create markets," says Mr Christopher Galvin, Paul Galvin's grandson who is Motorola's president and chief operating officer. "In the early days we largely created the auto entertainment industry in the US - that is where the name comes from."

When Motorola's founders began building car radios in the early 1930s there were no other suppliers and no market research. Despite this, Motorola's initiative led to the birth of a new industry. "That really began a pattern," says Mr Galvin, who first joined Motorola as a part-time employee in 1967.

Since its beginning in the back streets of Chicago, Motorola has pioneered the two-way radio, pagers, cellular telephone and, most recently, satellite communications through the Iridium consortium which is building a global satellite-based communications network.

In many cases, new businesses have grown out of old ones - and then been continuously adapted to better fit customer needs. For example, Motorola developed voice paging - effectively half of a two-way radio - for doctors in the 1960s. Next came digital numeric paging, then alpha-numeric paging - and now two-way paging which has been introduced in the US. Round the corner there is a new technology that allows for

compressed voice in a voice-paging service. "It is like putting a telephone answering machine in your pocket," says Mr Galvin.

"One keeps seeking new ways to combine science and technology to create a new service for a carrier, or a new way to have a person communicate in some more convenient way." To support this, Motorola continues to invest heavily in research and development spending: \$3.2bn last year.

"Motorola is a high technology business; that is where our engineering competence drives the value," says Mr Galvin. "We learned early that it was better to start something than to attempt to wait until the market was well known and then compete."

"We try to be first in innovation - that gives us a significant edge."

Although Motorola is now probably best known for its wireless products, including the ubiquitous cellular telephone which accounts for about 60 per cent of the group's sales, it has not always been that way. "For years we were known as a semiconductor company; we could never communicate to anybody that we were in the communications business," says Mr Galvin.

In fact, semiconductors, which account for 29 per cent of sales and have been growing at a compound annual rate of 23 per cent since 1991, remain a key part of the business. "Semiconductor technology is really one of the underpinning core competences of the institution," says Mr Galvin. The group's semiconductor products, which are mostly sold to external customers, include integrated radio circuits, control circuits and computing circuitry.

So where is Motorola concentrating its R&D investment today? "We continue to invest in what are called the derivative opportunities in all our known businesses," says Mr Galvin, who joined Motorola's board in 1988.

In semiconductors, he says Motorola is always trying to augment basic process technology - to shrink geometries, lower power consumption and make smaller, cheaper products while seeking out new applications for products such as microcontrollers and memories in smart cards.

For example, deploying an airbag used to involve a device called a "mechanical accelerometer" which measures the rate of deceleration using a weight and a spring built into something the size of a fist. To replace it, Motorola has developed a microcontroller device the size of a fingernail.

"You can go through all of our businesses and create what we think are very interesting derivative kinds of opportunities," says Mr Galvin. "We try to look for opportunities where the technology is changing... where there are new opportunities, for example the move from complex instruction set computing (CISC) to reduced instruction set computing (RISC) or the advent of hybrid fibre-coax cable."

Similarly, Motorola has positioned itself to play a part in the evolution of the information superhighway through the development of cable modems which emerged from a group of Motorola cellular engineers looking for an alternative - and perhaps less expensive - way to connect cellular base stations instead of running it across the telcoms network by leasing lines or using microwave links.

In fact, cable - which pumps data down standard cable television circuits at high speed - turned out not to be an optimal solution but someone figured out that the technology could be used as a low-cost way to transmit multimedia-rich data such as interactive television, video-on-demand or Internet Web pages into homes. "It illustrates the way we keep our minds open to things," says Mr Galvin.

In order to help stimulate innovation, Motorola holds annual technology meetings where business groups look at technologies 10 years ahead. "We literally lay out the road map of the technologies and where they will go," says Mr

Galvin. The process ends with the creation of a master map. But Motorola also insists on a minority report or a non-consensus report.

It was at one of these meetings that the first idea for Iridium emerged. "A fellow stood up and said 'Please don't chuckle but I believe I can take the cellular switches and the base stations and float them in low earth orbit satellites around the world and people will be able to make a cellular telephone-like call on every square metre of the earth other than the densely populated downtown areas because of the line-of-sight and communications issue."

"Everybody was totally surprised and said it was impossible because no such thing had ever been done before, but within about 30 minutes we committed to what turns out to be a multi-billion-dollar project."

"We committed the first 10 engineers to study it, and then the next 10 because we saw it ever worked it would be quite spectacular. So you don't bet the whole bank the first day, but you go off and study whether or not it would be possible and we think it is."

Iridium is designed to enable mobile phone communications in places where the current cellular system does not reach. Mr Galvin emphasises that it is a complementary service targeted at business travellers or diplomats or those with unique remote business applications. Because it will only accommodate 1.2m or 1.5m users worldwide, it can only really target the top 1 per cent or so of mobile communications customers.

However, Mr Galvin also notes that "if you give human beings a chance to communicate in some place they thought they could not before, they find very unique ways to justify and need that product once it is made available."

This is intended to be a niche market, but if it succeeds then ultimately it may create a low earth orbit, high-volume satellite business. "It doesn't mean it is not a risk; these are large projects," says Mr Galvin, "but we think the technology is solid, and financing is coming along. There

are still many challenges but we think these are the right kinds of risks for us to take for our shareholders."

But Motorola, which employs 142,000 people across the globe, also invests heavily in training and upgrading skills through the 'Motorola University'.

"When you get right down to it, an institution is just a group of people that are joined together by a set of ideas and principles," he says.

One of those principles is quality. "Quality is really a way of serving the customer and then, secondarily, for our shareholders, by lowering costs. We work very hard at developing the skills to prevent the possibility for defect."

"That in itself is a renewal process; it promotes reinvention because we keep seeking virtual perfection."

Mr Galvin also has a firm view on the concept of convergence. "We think, based on our experience, that there are so many different ways to evaluate what is an appropriate way to solve that unique consumer or business's problem - there will be many, many different combinations of and/or

inventions of ways of assisting people in telecommunications. Therefore the concept of convergence, where everything comes down to one product which solves all problems, is an over-simplification.

"The miffy thing about people, and why markets are so wonderful, is that people are different, so they value things differently." For companies such as Motorola, that means plenty of business opportunities. The challenge, however, will continue to be spotting those opportunities ahead of the competition.

"My father gave a wonderful speech at the 50th anniversary of the American Electronics Association," says Mr Galvin. "His message really was that when our company was founded in 1928, my grandfather couldn't see the next 16 surprises. Even when he started the business with battery eliminators he couldn't see the automotive entertainment radio as an industry; he couldn't see the portable two-way radio; he couldn't see the transistor; he couldn't see the computer; he couldn't see the satellite, a pager or a cellular telephone."

"None of those things he could see. So we like to orient



"The message was that in the next era you will have to look for the next 32 surprises because things will accelerate. We like to think we are preparing ourselves to recognise the next possible surprise."

James Goodnight of SAS Institute - Interview by Paul Taylor

R&D keeps software at the leading edge

SAS Institute has managed to balance technical excellence with a pragmatic approach to business and a caring approach to its 3,700 employees

Like many of his contemporaries, Mr James Goodnight, co-founder and driving force behind SAS Institute, US-based software developer, generally keeps a low profile.

While software entrepreneurs such as Bill Gates of Microsoft and Larry Ellison of Oracle are rarely out of the limelight, Mr Goodnight, SAS Institute's president, prefers instead to write code in his office surrounded by part of his collection of geological specimens.

But while neither Mr Goodnight nor his company, which specialises in analytical software and information delivery tools which make managing a business easier, are household names, SAS Institute and its flagship product, SAS System, are widely acknowledged to be market leaders.

SAS System is an integrated suite of information delivery tools which include Executive Information Systems, data warehousing, client-server computing, database access, applications development, graphics, data analysis, report writing, quality improvement, project management, computer performance evaluation and decision support.

Mr Goodnight and his team of dedicated software engineers, many of whom have graduated from local universities, have quietly built the privately-owned company based in Cary, North Carolina into the ninth-largest software group in the world. Last year, sales increased by 17 per cent to \$62.4m, marking the Institute's 19th year of double-digit growth.

"The industry's trend towards data warehousing propelled us over the half-billion dollar mark," noted Mr Goodnight when he unveiled the latest results in February. "As the only vendor providing a complete back-end-to-front-end data warehousing solution, coupled with the industry's leading business intelligence and applied analysis software for exploiting the warehouse, we anticipate strong revenue growth in this market through 1996 and beyond."

With the launch of the Orlando release of the SAS System late last year, the Institute continued to see more of its revenues come from the desktop. Last year, 61 per cent of the company's new software revenues was derived from personal computer and Unix software.

"By platform, the desktop continues to bring in a larger portion of new business for us," says Mr Goodnight, "however the mainframe is certainly not dead. Total revenue from PC software rose 36 per cent from 1994 to 1995, while Unix software revenue jumped 37 per cent, and mainframe revenue increased 13 per cent. This shows us that organiza-

tions are truly using our products in client-server settings."

Despite its financial success, SAS Institute still likes to think of itself as a college rather than a business, hence the "Institute" in its title and the gymnasium, rackets court and canteen in the wooded grounds of its campus-style headquarters. Its UK subsidiary is housed in Wittington, a renovated mansion on a substantial estate near Marlow in Buckinghamshire.

Since founding the company 20 years ago, Mr Goodnight, a graduate, statistical computing expert and professor at nearby North Carolina State University, has emphasised research and development and customer responsiveness.

SAS Institute has traditionally led all the main software vendors in terms of the percentage of its revenues devoted to R&D. Last year, the company spent more than \$17m, or 31 per cent of its revenues on R&D. The spending was boosted by the creation of two new R&D groups. The first, a data warehousing department was formed in April last year to address the expanding infrastructure requirements for building and managing corporate-level data warehouses as well as departmental level "data marts". New automation extraction, distribution, data

scrubbing and scheduling tools are currently under development for release later this year.

The second group, formed late last autumn, is the Business Solutions department which is targeting packaged solutions as well as continuing to develop SAS Institute's other horizontal and vertical product offerings.

SAS Business Solution for Financial Consolidation and Reporting, unveiled earlier this year, is designed to enhance decision-making by addressing the key IT and information issues encountered by finance directors. "Financial control is one of the keys to competitive advantage," says Mr Goodnight.

"Our large investment in R&D is what keeps our software on the leading edge, thus distinguishing SAS Institute from its competitors," he says. "We are fortunate to be a privately held company and not required to listen to a group of shareholders who are only interested in quarterly profits."

"Instead, we see our customers as our 'shareholders' and our pledge to them is to continuously evolve our software to best meet their organisations' unique information delivery needs."

SAS Institute's blue-chip customers include big companies



James Goodnight: "We see our customers as our shareholders"

(66 per cent of the installed base including 97 of the top Fortune 100 US companies), government agencies and universities. Every year the Institute distributes an annual survey - the SASware ballot - among its 29,000 customers. Responses to the ballot provide a foundation for future development and product enhancements.

SAS Institute, like its founder who still writes code, has managed to balance technical excellence with a pragmatic approach to business and a caring approach to its nearly 3,700 employees. There are no current plans to float the company, although Mr Goodnight acknowledges that this may eventually be necessary - if only to minimise estate duties.



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Mobile computing

Mobile computers are helping companies to hone their competitive edge - By Paul Taylor

'Toys' become business tools

The market for portable PCs continues to be one of the most dynamic segments of the global computer industry. World sales of mobile computers are forecast to more than double from \$30bn last year to nearly \$80bn by the end of the decade



Focus

Mobile computing: the portable PC provides an extra dimension to computing

The portable personal computer, and the notebook PC in particular, has established itself as a mainstream business tool helping individuals, companies and other organisations to maintain or extend their competitive edge.

Used in conjunction with fixed or wireless communications links, the portable PC provides an added dimension to computing, one which can help boost customer service, improve productivity and provide additional workforce flexibility.

Reflecting this, the market for portable PCs continues to be one of the most dynamic segments of the global computer industry - fuelled by the growth of flexible working, particularly in the US and the demand for "feature-rich" notebook machines.

"Companies are acquiring portables in record numbers, indicating pent-up demand for the flexibility afforded by being mobile," noted a recent study of the European market for portable PCs prepared by International Data Corporation for Dell Computer.

World sales of mobile computers will more than double from \$30bn last year to nearly \$80bn by the end of the decade, an 18 per cent compound annual growth rate, according to a recent study on pen, palmtop and notebook computers prepared by Frost & Sullivan, the market research firm.

PC cards - the credit card-sized devices which used to be known as PCMCIA cards - are expected to increase their share of market revenues from 4 per cent in 1995 to 9 per cent in 2001 as demand for "connectivity" in the form of modem devices, mobile data cards and network adapters continues to grow.

Pen-based mobile computers, mostly used in vertical markets, and palmtop or hand-held machines such as Psion's Series 3 organisers or Hewlett Packard's LX series are expected to hold a steady 2 per cent of the market while portable printers decline from their current 1 per cent market level.

"Pen technology is still fighting for acceptance outside healthcare and insurance vertical markets, where it has found strong growth for both pen tablets and PDAs (personal digital assistants)," say the authors of the Frost & Sullivan report.

While most analysts now accept that pen computing will not replace keyboards, despite improvements in handwriting

recognition software, pens are expected to evolve as an increasingly popular complementary input method. Meanwhile, the palmtop market - in the US in particular - has been revived by the introduction of the HP 200LX machine which features two-way wireless communications.

The marriage of hand-held PCs and wireless telephony - in new devices from Nokia and Motorola as well as add-on enhancements to existing hand-held machines such as the Psion 3a and HP 100LX - is re-igniting interest in the pocket-sized computing market following disappointment with first generation PDAs such as early Apple Newtons which lacked wireless communications facilities.

However, notebook and smaller sub-notebook machines are expected to continue to account for the vast majority of world mobile computing market revenues. Portable computer sales are growing twice as fast as desktops in some markets as companies replace desktops with portables, often sold with docking stations or port replicators enabling them to plug into corporate networks easily.

Mr Guy Swarbrick, business development manager in charge of mobile computing for Dell in the UK, says that 70 per cent of Dell's portables are sold with port replicators. "Continuous price and performance improvements make the decision to substitute portables for desktops easier," says Frost & Sullivan. "Businesses in Japan commonly use portables now as their primary computers."

"There is further evidence of this trend. According to an independent study conducted for AST Computer last autumn, 43 per cent of respondents said they expected that the notebook PC would replace the desktop machine to some extent and 31 per cent claimed to have already seen some evidence of this trend.

The same study suggested that the increased amount of home working was a key factor driving corporate portable PC purchasing decisions - 82 per cent said an increase in home-based working was accelerating the take-up of notebook computing.

Nevertheless, the IDC report for Dell suggests that despite the high adoption rate for portable computing, many companies are failing to get the most out of their machines. In Europe, for example, less than half the companies using portable PCs support remote communications, even just for e-mail. In the US, that percentage exceeds 80 per cent and the most common application for portables is e-mail.

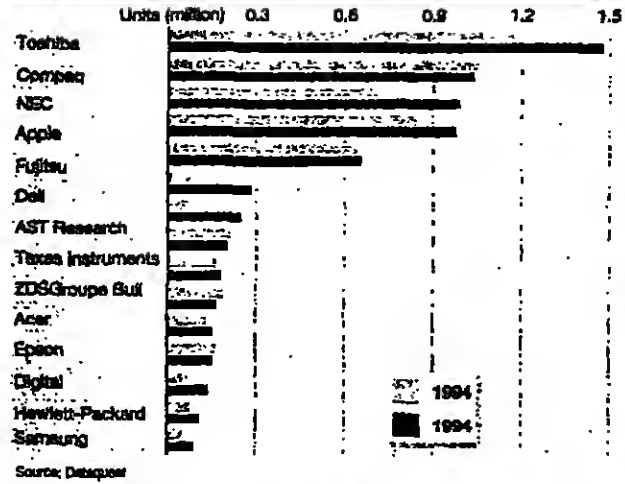
"For those companies that do take advantage of what mobile computing has to offer - which may mean reshaping applications and support - this creates a unique window of opportunity," the report says. "Companies have a one-time chance to gain competitive advantage simply by being smart about their usage of portable computers."

Other findings from the IDC study included the revelation that almost a third of European mobile PC users share their systems with colleagues and most still use their desk-



Derbyshire police use mobile computing in the fight against crime. Notes on an Apple MessagePad are sent from the scene to the police station via a PC card datacoms adapter which allows connection to a GSM cellphone

Top 15 vendors' worldwide shipments



top system as their primary machine. In contrast, in the US, the portable PC is the primary system half the time at large and medium-sized companies, and less than 10 per cent of mobiles are shared.

"Optimising applications for mobile computing can be as simple as providing remote e-mail connections or as complex as developing enterprise-wide sales force automation applications that rely on major back-end databases," says IDC.

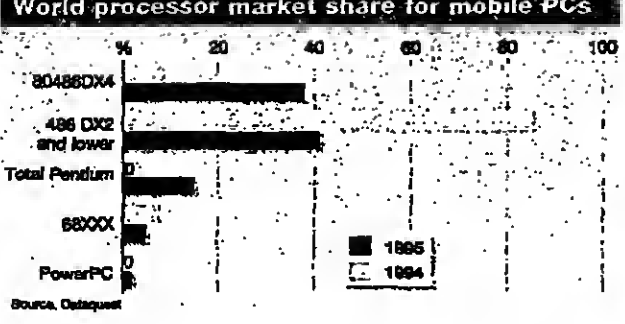
"but almost any effort will be rewarded. Simply allowing users to work in new venues - at customers' sites, at home or on the road - can increase productivity and job satisfaction."

The corporate decision to invest in portable computing has been made easier over the past year by a number of significant developments. In particular, as Mr Murray McKerrlie, Toshiba's product marketing manager in the UK,



Toshiba, the notebook market leader, says 55 per cent of its machines are sold with STN (Super Twisted Nematic) screens. But higher quality 'active matrix' TFT (Thin Film Transistor) screens are gaining market share

World processor market share for mobile PCs



notes the performance gap between desktop machines and their portable counterparts has been narrowed significantly.

Intel, the leading microprocessor manufacturer, has targeted the portable market for growth, bringing out lower power versions of its Pentium microprocessors packaged for the portable market much more quickly than with previous microprocessor generations. Meanwhile almost all manufacturers have abandoned the market for mono screens. For the moment, "passive" STN (Super Twisted Nematic) screens still account for a majority of sales - Toshiba, the notebook market leader, says 55 per cent of its machines are sold with STN screens. However the higher quality "active matrix" TFT (Thin Film Transistor) screens are gaining market share as greater manufacturing capacity and higher yields help erode the price premium.

Larger colour screens and longer-life Lithium Ion batteries - which provide considerably more power than earlier Nickel Hydride technology while weighing much less - are becoming the norm on top-end machines. Most of the leading notebook manufacturers have also recently introduced machines based around Intel's Pentium 133MHz processors as they attempt to differentiate between entry-level and premium-priced machines.

Despite this, Dataquest, the market research firm, argues that it will be tough to differentiate on processors alone. "Making things even tougher is the shift towards 'value' notebooks," says Dataquest.

"The feature sets are now 'good enough' on value products and do not ask users to make sacrifices in terms of performance. We expect solid unit shipment growth this year, but differentiation - other than on price - will be tough."

Portable machines still sell at a marked - although reduced - premium to their desktop counterparts. Two years ago, a portable machine cost 2.8 times the price of a comparable desktop; now the premium is down to 40 per cent.

Nevertheless, strong sales and relatively healthy margins means that no serious PC manufacturer can afford to ignore the portable market. "Eighteen months ago, notebook PCs were perceived as executive toys," says Mr Swarbrick. "Today, notebooks are perceived as genuine tools - the mobile road map is much clearer to the industry than it was before."

Hand-held devices - By George Black

Smaller and cheaper

One of the main growth areas is in field systems, particularly delivery services

Small hand-held devices have spread widely among many businesses in the past couple of years, helping many thousands of workers who had no previous experience of computers.

Their usefulness has grown as they have become smaller, lighter and more robust, able to store more data without losing it and to be used longer before batteries run out. Their small screens have become easier to read and they are easier to operate.

Communication with head office by modem is easier and cheaper, so travelling workers do not lose time on the road. Most importantly, the price of the equipment has come down a lot.

The world market for hand-helds and portables for business use (including palmtops, but excluding laptop and larger machines) is valued at about \$1bn a year and growing at 15-20 per cent a year, estimates Husky Computers, a leading UK-based manufacturer.

Many types of worker who use only a few business applications and who do not have to make presentations on their screens, may find it is not necessary to incur the expense of a laptop computer. They can manage better with something cheaper and lighter.

For many applications involving on-the-spot data capture, a device which can literally be held to one hand may be preferable to a laptop or subnotebook which cannot.

Software development is often the most difficult part of adopting hand-helds. The software frequently has to be custom-written because the applications tend to be specialised and standard business packages cannot easily be tailored.

Manufacturers often work closely with value-added resellers (VARs) and users to produce the software. Most sales are made through VARs rather than direct sales teams.

One of the main growth areas for hand-helds is in field systems, particularly delivery services. Rugged hand-helds with touch screens instead of keyboards can solve many of their problems.

Before going on the road, van drivers collect their hand-helds loaded with the itinerary and delivery schedule. The machine sits in a cradle in the cab. During a visit, a receipt can be printed out and the customer's signature on the touch-screen can be stored as proof of delivery.

Because these machines usually employ a standard Microsoft DOS operating system, the information can later be quickly transferred to a central computer system.

A number of big UK-based companies have adopted this technology in the past couple of years. BP Oil, for example, uses hand-held devices from ACS Data in its trucks to the UK and Germany.

Mr Graham Douglas, its technology development manager, says the devices have simplified paperwork, saved money and pleased both drivers and customers.

"It saves 400,000 delivery notes per year in the UK, so it is environmentally good as well as giving a substantial reduction in time spent on paperwork," he says.

He notes that hand-helds



The Husky FS2, with rugged construction and single-handed operation, suits the power of MS-Dos computing into the most demanding work situations. BT uses Husky hand-helds for allocating work to technicians

used in vehicles carrying hazardous chemicals have to be certified as safe. Some hand-helds designed for general business use may not be sealed, so there might be a risk of creating sparks.

Air Products has equipped its drivers in six European countries with ACS Data devices, making it easier for them to record accurately details of deliveries and collections of gas cylinders.

Mr Hugh Coverley, project manager, says: "We concluded that keypads were too difficult and we needed a touch-screen system. We did not want to have to teach the drivers to type."

"They were sceptical at first, but they took to it very quickly because they did not like the paperwork and this

Mobile field systems may be appropriate for many users

got rid of most of it." These mobile field systems may be appropriate for many other types of user - from couriers to airlines' in-flight duty-free sales staff, in public authority building inspectors, to gas, electricity and water meter readers.

British Gas's service engineers carry Panasonic notebook computers, but its meter readers and other visiting staff, with more limited and structured information requirements, carry Psion hand-helds. Thames Water engineers and water readers also use Psion machines.

BT prefers Husky hand-helds for allocating work to its technicians, although many of its staff use laptops. Financial services companies, which usually give laptops to their sales people for demonstration purposes, often choose to give hand-helds to staff whose job is to collect cash from customers' homes.

Service organisations of various kinds have adopted hand-held devices, especially for

engineers who maintain and repair customers' equipment on site.

Suppliers to shops, pubs and hotels use hand-held devices to take their orders on the spot and transmit them back to their base. This cuts the delivery time and can help to speed up invoicing.

Manufacturers, distributors and retailers have started using hand-held rugged scanning devices for their stock-taking operations.

Scanning of bar codes is preferred to keyboard input because it is much faster and less error-prone. Some devices have the added advantage of being able to operate at a distance. Some can be strapped to the back of the hand so that the hand can be used to pick things up without having to put the device down.

By capturing all the necessary information at a single swipe of a bar code, scanners save a lot of time. This also enables the data to be transmitted easily to headquarters for analysis, which helps the company to identify best-sellers and worst-sellers and to plan accordingly.

Radio is becoming the preferred method of communication from the warehouse, telling the manager at once that the right order has been picked, generating the paperwork for the transaction and triggering a re-order when stock gets short.

Hand-held scanners are therefore increasingly seen as an integral part of developing electronic commerce. The use of hand-held devices may spread not only among service providers but also among their customers.

Retailers are assessing the effectiveness of hand-held self-scanning devices for use by shoppers. Safeway supermarkets are already heavily committed to these devices as a way of reducing queuing time for customers.

Other supermarkets are watching Safeway's progress. The question now is whether that movement will gain critical mass.

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■ Notebook PCs By Tom Foremski

Increasingly the first choice

This category of PC is becoming more powerful, more reliable, lighter and better-suited for a wide variety of tasks

Notebooks are more expensive than desktop systems and have lagged behind in terms of the latest technology but as their prices fall and vendors bring out improved models, notebooks are increasingly being chosen instead of desktop systems.

IBM estimates that by the end of 1997, about 80 per cent of its PC sales to business customers will be notebook computers. And US market research firm Dataquest predicts that the mobile computer market in 1996 will grow by about 30 per cent - double the

15 per cent growth rate in 1995. Notebook computers represent the largest segment of the mobile computer market and this category of PC is becoming more powerful, more reliable, lighter and better-suited for a wide variety of tasks with large hard drives, brighter colour displays and add-on CD-Rom drives.

Notebook computers have tended to lag behind the latest microprocessors available for desktop systems because they require special versions that operate on 3.3 volts rather than 5 volts, to conserve battery life. But Intel is trying to narrow the gap and release versions of its Pentium microprocessors for notebooks within several months of the desktop versions becoming available.

Falling hard drive prices and special low power drives are also more readily available, enabling notebook computers with plenty of data storage capacity. And leading notebook

manufacturers such as Toshiba and Digital Equipment have introduced modular notebook computers that allow peripherals such as CD-Rom drives to be easily added by users as they need them.

But the greatest boost behind the increased popularity of notebooks is changing business practices; many large organisations are changing the way they organise their offices. Some staff no longer have a permanent office desk and instead reserve time at a company office in a similar way that they might reserve a hotel room. Their files and personal effects are stored in moveable file cabinets and when they return from a road trip, from working at home or from working at a client's site, they book time at a desk in the home office and simply plug their notebooks into the office local area network.

"More and more people travel from office to office and

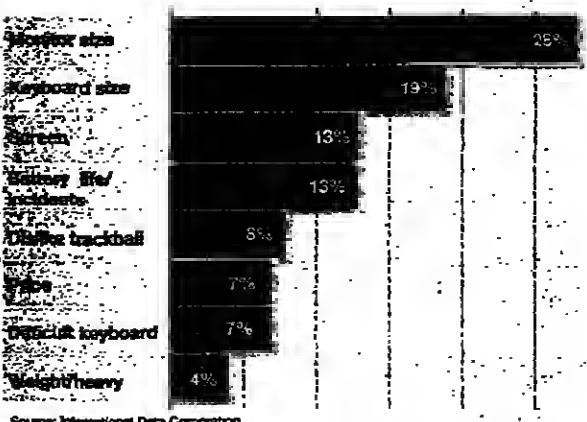
notebooks allow them to take everything they need with them," says Mr Bob Cushing, European marketing director at 3Com, which makes Lan cards for notebook computers.

"This way of working allows companies to assign a computer to an individual rather than to a physical location. The computer becomes more of a personal computer than the desktop PC."

According to Dataquest, the leading manufacturers of mobile computers are Toshiba, Compaq Computer, NEC, IBM, Apple Computer, Fujitsu and Dell Computer.

The key trends this year are for lighter notebooks such as Digital Equipment's HiNote Ultra II, which is among the thinnest and lightest, at about 4lb. Dataquest notes that in 1996, most notebook computers will be built around powerful Pentium microprocessors compared with Intel 486 DX4 microprocessors which formed

Primary drawbacks of using a notebook computer



the core of most notebooks shipped in 1995.

"As the market completes the progression to the Pentium architecture this year, we expect a major shift in product mix for the top vendors in the form of a major emphasis on value notebooks," said Mr Mike McGuire, senior industry analyst at Dataquest.

These value notebooks will be cheaper models without some of the high-end features of current models.

Notebook computers are still more expensive than desktop computers and they offer PC manufacturers a chance to make some money and escape the razor-thin profit margins on desktop computers.

But producing a notebook computer is not easy, and several PC companies have faltered because of the increased development costs required and the manufacturing challenges. Intel's efforts should help to

make notebooks easier to manufacture - and also cheaper for buyers.

Intel is already the largest producer of motherboards for desktop systems. Motherboards hold the core electronics of a PC, the microprocessor, memory and other associated chips. PC manufacturers often buy motherboards instead of designing their own, to get into the fast-changing PC market more quickly.

Intel is discussing plans to manufacture notebook motherboards. With a notebook motherboard from Intel, a computer manufacturer just needs to add a case, keyboard, display and some extra chips.

Intel is likely to upset some of its microprocessor customers who would prefer to keep the notebook market a difficult one to enter for newcomers.

With an Intel notebook motherboard, virtually any company large or small, will be able to offer a notebook computer, leading to more competition and lower prices for customers. However, Notebook manufacturers will still be able to differentiate their products with custom designs that

stress key features such as weight.

As more staff choose notebooks instead of desktop PCs, organisations face new challenges in supporting those users.

Notebook users tend to play around with the configuration of their systems more often, which leads to problems running some applications. They also tend to load non-standard software. And it is also more difficult for companies to make sure that their notebook users have the latest version of software applications because the computers are off site so much of the time.

Ensuring that staff are using the latest data files, such as price data, or sales figures, is another challenge that requires good synchronisation software that can automatically update notebook files.

But despite such challenges, the future for notebook computers is assured, and it takes the PC into a more flexible environment, matching changing work styles and business.

■ Docking stations and Lan cards - By Tom Foremski

New products on the way

For many notebook users, local area network cards are a good option when docking stations are not available

Docking stations and local area network (Lan) cards are the key bridging technologies that turn notebook computers into full featured computers, capable of rivaling the best desktop systems.

As corporations upgrade their systems, many employees are choosing notebook computers in combination with docking stations and Lan cards that allow them to access peripherals such as CD-Rom drives and office Lams. New developments in docking stations and Lan cards have made these products more affordable and also improved them - and new products out later this year promise to make this category of computer products even better.

Docking stations provide notebook users a way of plugging the notebook into a series of ports that give them access to peripherals such as full-sized keyboards, desktop monitors, Lan connections and storage devices such as hard drives and CD-Rom drives. One disadvantage of most docking stations has been that they do not allow what is called "hot docking" - plugging a notebook computer into a docking station while it is on and running an application.

Microsoft Windows 95 supports a feature that allows notebook users to plug into docking stations while the notebook is in a suspended mode but not all docking stations yet support this feature.

The notebook user must make sure to switch off the notebook, plug it into the

docking station then restart the computer - a time-consuming process that most users would rather avoid. This situation is set to change with a new chip set developed by Intel called the 380 Dock Set which will allow notebook makers to create docking stations that will allow users to dock their notebooks while they are still on. The chip set will be available by the middle of this year and the first docking stations based on the chips should be out by the end of this year.

Other companies, such as PicoPower, are also offering hot docking technology. PicoPower's SmartDock products will be available later this year in a chip set offered to docking station manufacturers. With SmartDock chips, the docking station automatically detects if the notebook computer is on, and also allows users to disconnect their notebooks without danger of data loss. It will also reconfigure the system automatically, depending on the status of the notebook.

Compaq Computer is also working on its own hot docking technology. However, these different hot docking technologies are incompatible, which means that users must be careful to use the right type of docking station to ensure compatibility with their notebooks.

Docking stations also vary in what features they offer and are available in a variety of forms from simple port replicators to more sophisticated versions that allow users to insert their notebooks into a docking station as if they were inserting a videocassette tape into a VCR, with the port connections made automatically.

For many notebook users, Lan cards are a good option when docking stations are not available. Based on the PCMCIA standard, Lan cards give users the ability to connect to Lams, whether at their place of work or when visiting clients.

Leading vendors of Lan cards include 3Com, Megahertz, Motorola, and Xircom. Because they are based on the PCMCIA standard, cards from different vendors should work with all notebook computers that have PC Card slots.

"One of our most popular products is our modem-Ethernet card which offers two functions yet just takes up one card slot," says Mr Bob Cushing, European marketing director at 3Com. This allows users to plug into the office network and also work from home.

Lan cards are also increasingly found in versions that operate on 3.3 volts, which helps to conserve power for notebook users and extend battery life. This makes the Lan cards more compatible with notebook computers which operate on 3.3 volts.

Wireless Lan cards are still in development - but could further add to the value of notebook computers. With a wireless Lan card, no physical connection to a Lan through Lan cards or docking stations is necessary. Wireless Lan connections also mean that companies can move staff around an office more easily since they avoid the expense of running new cables.

However, wireless Lan cards are a lot more complicated than regular Lan cards which have a physical connection. For one, they are not as fast as an Ethernet card - with data transfer rates in the 800 kilobit per second range rather than the 10 megabit per second rate available to hard-wired Ethernet users. The wireless data rates are fine for e-mail but are frustrating for users trying to transfer large files or applications.

New wireless Lan technologies are being developed that could dramatically increase data transmission speeds but it may take several years for these technologies to be adapted for notebook users.

■ Portable modems and multifunction PC cards - By Philip Manchester

Expanding capabilities

IBM and Toshiba are using a technique called Digital Signal Processing (DSP) to combine many functions into a single adapter

Many innovations in PC technology are the result of attempts to make computing mobile. The demands for miniaturisation, low power consumption, improved battery technology, better screen technologies and small, high-capacity disk storage all stem from the need to make computers smaller and lighter.

The development of the PC card (formerly PCMCIA) is another example. The PC card takes the place of cumbersome adapter cards which are used to expand the capabilities of desktop computers - typically, to connect PCs to local area networks (Lans) or the telephone network. The PC card, which comes in the form of a "plug-in" module about the size of a credit card, does the same job in a portable computer.

Until quite recently, PC cards were built to carry out a single function. But the demand for new features has pushed manufacturers to design dual- and multi-function

PC cards. "The manufacturers are shaping the direction by sticking to a design with only two PC card slots or ports. There is no sign that they will increase this," says Mr Joe Nash, export sales manager at PC card builder-Portable Add-ons.

"Usually one port is committed to an Ethernet Lan connection and the other to a modem. But if you can double up by putting both on the same PC card you can leave the user with other possibilities for using the other port," says Mr Nash.

Portable Add-ons has recently launched a new range of PC cards which combine network connections, modem and fax features in a single plug-in card - leaving a spare slot in a portable computer for such uses as GSM and multimedia.

GSM stands for General Systems for Mobile - the European-wide standard for cellular telephone communications - and is of growing importance in the mobile computing market.

While the PC card goes some way towards solving the problems of the size and weight of adapter cards, another recent development promises even better power-to-weight ratios. Leading portable computer manufacturers IBM and Toshiba are using a technique called Digital Signal Processing (DSP) to combine many dif-



Smaller and lighter: the water industry uses a Toshiba Portégé in the field

ferent functions into a single adapter.

DSP has its origins in the esoteric world of engineering - especially for telemetry, speech and acoustics processing. The complexities of unravelling high-speed bit streams from measuring equipment or from speech recognition demand a special form of input-output processing. DSP provides this - both to speed up translation of signals from one form to another (digital-analog and vice versa) and to accommodate a wide range of different signal sources.

A DSP microchip can be programmed to handle any kind of digital signal from a video or audio stream to a communications session. More importantly, it can be changed at any time to process different kinds of signals.

"DSP lets you dynamically program the chip to process things like speech recognition, video and modem use," says Mr Vincent Smith of IBM's personal computer business. "We have incorporated DSP technology into our leading-edge portable computers and see it as a major change," he says.

IBM's top Thinkpad portable computers include a proprietary DSP product called Mwave. It handles stereophonic audio, data-fax modem traffic and full telephony functions, including a two-way, full-duplex speakerphone and telephone answering and voice-mail features. IBM is also building the Mwave DSP into its Aptiva brand mass-market desktop computers for multimedia use.

Mr Smith says that DSP is especially useful in portable computers because it acts as a buffer against future technology developments.

"Currently it is more expensive than the PC card option

and we are only using it in our top-end portables. But it is a good way to insure against technology developments. You can upgrade the DSP with software so, for example, you can change from a medium-speed modem to a high-speed modem by loading a new program from a floppy disk," he says.

He adds that DSP offers the possibility of exciting new uses for portable computers: "You can process any kind of digital signal by just writing a program. I know someone who is using it to build a radar device at much lower cost than traditional methods. There are all sorts of possibilities," he says.

Mr Murray McKerlie, product marketing manager at Toshiba UK, is equally enthusiastic. "DSP is definitely the start of a trend and we would expect it to have an impact on sales of modem cards in the next couple of years. You can put full voice and data telephone features, network connections and fax in a DSP. You don't need a PC Card modem," he says.

Last month, Toshiba launched the first of what it expects to be a growing range of portable computers which feature DSP technology. "We have started by putting DSP into the top-range portables. But we fully intend to bring DSP right down the range soon," Mr McKerlie says.

It is only a matter of time before DSP will make current adapter card technology obsolete - something that third party card-builders must take account of.

"They have to stay one step ahead of the PC manufacturer. We are building more functions into portables to reduce the size, weight and the amount of silicon in our products," notes Mr McKerlie.

■ Managing virtual networks and wide-area Lams - By Philip Manchester

Fresh strategies are needed

VPN services are one of the fastest-growing areas of networking. Many companies are turning to outside suppliers to provide their network infrastructure

There was a time when managing a company computer network was relatively simple. The network infrastructure - the cables, connections and software - were all within the boundaries of a company's offices and under the direct control of a company's technologists.

But this is changing fast in a world where networks extend beyond the reach of individual company control. Networks in the 1990s are less easy to define and new strategies are needed

if they are to be managed effectively.

There are two increasingly popular approaches to the expansion of networks. One is to buy in network services from a virtual private network (VPN) supplier; the other is to extend the reach of established local area network (Lan) technology to the wide area network (Wan) to create a "wide area Lan".

In both cases the aim is to provide a single view of the company network both from a usage and from a management perspective.

VPN services are one of the fastest-growing areas of networking and many companies are turning to outside suppliers to provide their network infrastructure. Using the analogy of the information superhighway, a VPN service is similar to a motorway trunk road; it gives companies a basic carrier service for their data networks.

A recent report from market researcher Ovum forecasts, for example, that the US market for VPN services will grow from \$3.6bn in 1995 to \$5.5bn in 2000.

The market in Europe and Asia-Pacific is expected to grow even faster, from \$100m last year to \$7.5bn by 2000.

Many companies, however, are looking at extending the concept of their internal Lams to the Wan so as to retain control over their networking resources.

"The distinction between the Lan and the Wan is becoming more blurred - especially in the context of Internet and 'Intranet'," says Mr Graeme Allan, UK marketing manager at network management specialist Bay Networks.

"There is a growing trend towards managed services like VPN because of the frustration that companies have faced when building and managing their networks. We see the answer in what we call 'smart outsourcing'," he says.

Mr Allan defines smart outsourcing as a way for companies to keep control of the important part of their network and leave the lower level network transport to the service suppliers.

"It is important that businesses do not throw the baby out with the bath water when they look at outsourcing network services. They must keep some knowledge and expertise in their own organisations. If you give away too much, costs can escalate."

"If you don't give away enough, then you won't save any money," he explains.

According to researcher IDC, Bay Networks took 51 per cent of the world market for "low end" Lan management software in 1995. Mr Allan says this lead has come from recognising the importance of reaching beyond the Lan and seeing company networks as a whole.

Bay Networks' Optivity network management software works on all of the leading

computing platforms from Windows up to IBM.

"We have been working for some time to extend Lan concepts to the Wan and extending our reach to all platforms that companies use. Our recent acquisition of Armon gives us the opportunity, for example, to see remote network components as part of the scheme. More important, it gives us an application view - something that has not been possible before."

In simple terms, the Armon technology allows network managers to see network traffic in terms of real business applications. It monitors the whole network and lets a company adjust traffic flow according to specific application usage.

"Traditionally, network management has concentrated on lower level traffic movement - unrelated to the application. But we see that real management of the network is not possible unless you can get an application view," says Mr Allan.

He adds that it is important for this function to remain

under the control of the company: "It is essential to keep this in-house. You can outsource the grunt work - the lower level stuff. But you must keep control of the higher level application view because you are the only one who understands the business implications."

Managing networks is never likely to be easy - especially against a background of rapidly changing technology. As companies place increasing emphasis on mobile workers and distributed applications, management of the network and those who are attached to it is likely to cause more headaches for network managers.

Bay Networks - along with other network management software suppliers such as Cabletron and 3Com - are now able to provide the tools to help. But the final responsibility will, as ever, rest with individual companies. They must take the initiative and adopt a balanced approach which combines their knowledge of business priorities with the technology expertise of the specialist.

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السنة الأولى

Ch 11/150

Mobile computing

Gizmos and gadgets - By Michael Dempsey

New arm of the IT industry

Systems that are self-contained and totally portable have special appeal

Varian Oncology Systems is a \$1.1bn US corporation that sells radio therapy systems for the treatment of cancer and Mr Adrian Orchard, Varian's quality assurance and information systems manager for the UK, travels to the company's Palo Alto headquarters five or six times a year. On every trip he is accompanied by what he calls his "little blue friend".

This companion is a £149 Zip drive from Iomega which allows users to store large amounts of data on a small device the size of a Walkman. The Zip drive slots into any PC or portable with its own special disks containing up to 100 megabytes of data, as opposed to 1.44 megabytes on a typical 3.5-inch disk.

Mr Orchard explains the appeal of the Zip drive: "I present to people within the corporation and I have to carry around presentations that occupy a lot of disk space."

He has found that the Zip drive allows him to load whole libraries of clips and images and he doesn't have to worry about losing masses of data held on the hard drive of his laptop. The Zip drive and its disks will take all the data he needs and the product makes company data more secure.

"I used to back up company-sensitive information on the hard disk of a portable PC, but a PC can be stolen. Now I store all the files I'm going to use on two or three Zip disks and keep them in my pocket."

He believes this inexpensive product has made a big difference to the way he works, enabling him to alter sophisticated presentations on the move.

Presentation programs such as Microsoft's Power Point have created their own problems, demanding more and more storage to offer the very facilities that users demand. Mr Orchard sums up the way one small item can resolve this problem: "Zip extends the capability of my Notebook, particularly as modern software is so demanding on disk space."

Iomega has shipped more

than 1m Zip drives, transforming itself into a scam corporation in the process. The very phrase "my little blue friend", which Mr Orchard uses to describe the product, points to the peculiar appeal of IT systems that are self-contained and totally portable.

Users seem to derive intense satisfaction from practical equipment that can be carried on the person - and this is the dividing line between Personal Digital Assistants and laptop PCs.

Palson palmtop computers continue to rake in cash for this UK company and Palson announced a 46 per cent rise in turnover to £90.5m in 1995. Lloyds Bank is one financial institution that wants to use Palson's success to attract high-flying customers, and the bank has produced an elec-

tronic chequebook package for Palson palmtops. Presently on test in the UK, the package allows customers to download a payment order to their bank via a modem.

With 1,800 branches and 7m customers, Lloyds describes this experiment as "just one method of delivering services." But a spokeswoman admits that banks have noticed a gap in the market for truly mobile services. "We're looking at ways to access banks from hotels or trains."

A £3m High Performance Radio Local Area Network, or Hiperlan, project funded by the EC has recently concluded that traditional computer networks can be replaced with an approach dedicated to the executive on the move. The scheme involved industrial partners such as French aerospace giant

Dassault and academic contributors such as the UK's Bradford University.

Radio links between PCs are already commercially available, but Stephen Barton, Bradford's professor of signal processing, says Hiperlan has proved the feasibility of a more exciting development. "We have built a demonstrator for ad hoc networking. This means laptop users meeting in an airport lounge and networking without any wired connection."

Prof Barton believes that a plug-in card with a 4cm extension acting as an aerial will soon allow business users to conduct group work sessions on laptops in any environment. The demand for serious computing power on the move is unabated. Xyratex, a £280m UK management buy-out from

IBM, has just launched Maxit - a portable drive which retails for £299 and contains 540mb of data, the equivalent of one PC stuffed to the gills with information.

The rise of the Internet has spurred Xyratex to bring this device to market. Well-travelled users loading huge chunks of graphics and text from the burgeoning number of Web sites guarantee Maxit a ready market.

"It is ideal for Net surfers that want to take a load of stuff off the Internet," Xyratex explains. Maxit is designed to be compatible with Apple graphics workstations, and Xyratex reckons the radically-oriented staff who drive these machines will be proud to wave a brightly-coloured drive about at airport security.

The raft of storage products fits the pockets and needs of an emerging user-class. Mr Paddy Holahan is president of the Irish software house East Coast Development which produces Winlynx Laptop Backup (WLB), a £100 computer program written to allow Zip and Maxit users to blast data onto their cherished gadget instantly.

Mr Holahan underlines the message that well-travelled computer-literate executives need a new level of security: "The laptop market is growing extremely fast, many people use a portable PC as their primary machine and need security to match that." The power offered by physically attractive products allied to the convenience of software such as WLB is creating a new arm of the IT industry.

Taiwanese manufacturer Plustek has latched onto the demand for advanced equipment that fits into a briefcase. Its £99 Pagerreader is the size of a pencil case and can be plugged onto a PC to permit document scanning on the spot.

Pagerreader appeals to the presentation-conscious business traveller who discovers a printed image and needs to insert this into his material instantly. Plustek is only 10 years old, but it has joined the ranks of companies making good money out of a market which is emerging from a marriage of physical need and popular aesthetics.

New technologies - By Tom Foremski

Innovation is the key

With more power squeezed out of batteries, notebooks can be lighter, smaller and use faster microprocessors - which typically use more power

New battery and screen technologies are emerging that help lower the price of notebook computers and extend battery life - to offer users longer working time.

Battery life has always been a key focus of notebook manufacturers and a key limiting factor in the design and weight of notebooks. Early notebook computers had just two hours of operating time between recharges, but the latest battery technologies and special power-saving features have extended the operating life of most notebooks to four hours and more.

Battery technology has always been the weak link in notebook computers. While notebook microprocessors, memory chips and hard drives have grown more powerful every year, battery technology has changed more slowly. This has forced notebook manufacturers to focus on ways of saving battery power by using chips operating on 3.3 volts instead of 5 volts; using power management applications that selectively shut down or idle notebook functions such as the hard drive; and reducing microprocessor speed for simple tasks.

Companies such as Duracell, for example, have built smart batteries - rechargeable batteries with chips inside them to help more accurately gauge how much power is left.

Earlier software-based power gauges were inaccurate, requiring a 20 per cent margin of safety so that users could save files before the power gave out completely. This was because monitoring how much battery power was available depended on the battery's chemistry, its age, temperature and other factors difficult to measure.

Smart battery technology gives a more accurate figure of power available, freeing up much of the 20 per cent of the power that remained unused.

Smart batteries also monitor the recharging process, making sure that the battery is correctly charged, charged to full capacity and helping to extend the number of times the battery can be recharged. Previous methods of recharging a battery could leave 10 per cent of its capacity uncharged, further limiting battery life. With more power squeezed out of batteries, notebooks can be lighter, smaller and use faster microprocessors - which typically use more power.

Changes in battery chemistry are also important. Nickel-cadmium (NiCd), and nickel-metal-hydride (NiMH) batteries are gradually being replaced by lithium-ion (Li-ion) batteries which offer 2.75 times more energy per unit weight compared with NiCd batteries. But supplies of Li-ion batteries are limited because there are few manufacturers.

Li-ion batteries are more expensive and can also be tricky to use. Apple Computer last year found some problems in its PowerBooks using Sony Li-ion batteries which had a fault that caused some units to burst into flames. Li-ion batteries are also more sensitive to recharging and can easily be damaged by overcharging.

Zinc-air batteries are another technology that offers long life, but their use has been limited because of their higher volume and weight. However, they are useful as secondary batteries that users can carry with them separately and plug in as needed. They are capable of powering a portable computer for as long as 12 hours.

Replacing NiCd batteries also has important environmental benefits since cadmium is a toxic substance and the disposal of NiCd batteries can be a problem. Yet another battery technology that is still in its early stages of development but that shows promise, is lithium polymer. This plastic-like battery material is flexible and can be formed into a variety of shapes. Notebook designers can tailor lithium polymer bat-

teries to the design of the computer rather than the other way around - and make better use of unemptied space in a notebook.

Several companies are also working on manganese-oxide-zinc and nickel-zinc batteries, but so far these have shown important disadvantages in terms of limited charge-discharge cycles and slow recharging.

In terms of notebook displays, the key technology focus has been not in the displays themselves but in manufacturing the screens. Creating a liquid crystal display is similar to producing a chip and requires the same attention to cleanliness and accuracy except that the LCD display is much bigger than a chip. Manufacturers have to accurately place transistors behind each pixel; multiple transistors in the case of colour displays. Each transistor must be connected to display control circuitry.

A typical LCD display has 640 by 480 pixel resolution, or 307,200 pixels. Creating a flawless display is very difficult which is why a typical notebook display may have a dozen or more dead pixels without being noticeable. Even with such a margin of error, the number of unusable LCDs produced has been low.

However, improved manufacturing techniques have greatly improved yields, resulting in lower manufacturing costs and lower prices. And as South Korea- and Taiwan-based manufacturers have emerged to challenge the dominance of the Japanese LCD producers, the combination of competition and improved yields has led to much lower prices for notebook computers.

The ideal LCD display for notebooks, would be one that mimics the high resolution of a paper document. Such a display would need almost 7m pixels and Xerox subsidiary Dpxix says it has developed such a display. However, Dpxix is producing the display in small quantities for custom applications such as displays in military aircraft and it will be several years before the displays can be manufactured in high numbers and at a price affordable for notebook use.



Lloyds Bank has produced an electronic chequebook package for Palson palmtops. Picture: Trevor Humphries

An AS/400 Advanced Series Solution



is a client/server network that sends sales data throughout the Sega empire instantly

Behind Bill Downs' success in keeping Earth safe from alien life-forms



and the ability to add more power at a moment's notice.

He was also the first at Sega to see that AS/400 Advanced Series could do all this with lower administrative costs than other platforms.

When your business grows from zero pounds in seven hundred and fifty million pounds in five years, choosing a client/server system that can keep up with the growth is pretty important.

Which is what Bill Downs of Sega has found with AS/400 Advanced Series.

"In five years, we probably would have had two or three different business systems if we had started with something that didn't scale as easily as AS/400," says Bill. "None of us had the idea we would grow as fast as we did."

Bill has his AS/400 Advanced Series running the entire business. He's using it to process orders and schedule delivery to 20,000 retail stores overnight. He has his company's PCs, Apple Macs and Silicon Graphics workstations running off it. And his AS/400 Advanced Series does all this with a technology budget of less than two-tenths of one per cent of revenue, and with minimal support staff.

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6 FT - IT

Mobile computing



Times Square, New York, after a blizzard in January virtually shut down the city

Remote access and communications software - By Geoffrey Wheelwright

Wintery window of opportunity

Symantec saw a great chance to seed many more copies into the East Coast corporate world

When the icy blast of winter hit the East Coast of the US with a vengeance last January, and thousands of people were trapped at home, unable to get to work, personal computer utility software maker Symantec spotted an opportunity.

The opportunity was to promote the company's remote access communications software - which could allow snowbound workers to get to work without leaving home.

So Symantec's Delrina Group announced "Operation Snow Storm", a so-called "relief effort" to make 500 copies of its popular pcANYWHERE for Windows remote computing software available to corporations free of charge (it normally sells for about \$129) to

assist workers unable to reach their offices. Although Symantec claims more than 2m active users for the product, the company saw a great chance to seed many more copies - along with a compelling reason for them - into the East Coast corporate world.

The pcANYWHERE for Windows Remote Control product is supposed to allow users to work from home, using their home PC to access the office. It requires a PC equipped with either Microsoft's Windows 3.1 or Windows 95.

"With the excessive amounts of snow we have experienced, it is becoming increasingly difficult to get to the office. This product enables workers to stay at home and work as if they were sitting at their desk," said Mr Christopher Callis, general manager of the Communications Business Unit, at the time of the snow storm.

"We are very concerned with the risks individuals are facing this winter, in light of the hazards of travel under such

extreme conditions."

The software allows employees to dial into their office PC. Once connected, users can log into the network, access documents and remotely operate both Dos and Windows-based applications. Symantec claims that pcANYWHERE further increases productivity by enabling users to remotely access devices on their PCs and networks, such as printers and CD-Roms. "This enables people to remain productive from the comfort and safety of their own home," added Mr Callis.

Meanwhile, rival Stac Electronics is hitching its star to the expected success of Microsoft's upcoming release of Microsoft Windows NT 4.0 with the announcement that it will release a new version of ReachOut, its remote access software, following the shipment of the new operating system later this year.

"As more and more corporate users migrate to Windows NT, Stac plans to meet their demands by developing Reach-

Out with a superior design that will take advantage of the 32-bit architecture," said Mr John Bromhead, vice-president of marketing for Stac. "ReachOut will deliver the fastest, most reliable performance under Windows NT 4.0."

The company says Reach-

"ReachOut users see each character as they are typing, rather than having to wait until half a sentence is typed before they get any feedback," claimed Mr Bromhead. "ReachOut's architecture provides a much faster response time for the user."

However, all providers of remote access software may find themselves losing market share to Microsoft Windows 95 itself - which includes built-in remote access capabilities. In addition to the ability to dial in to Windows NT's RAS (Remote Access Server), Windows 95 supports dial-in to Novell NetWare networks running NetWare Connect; dial-in to another Windows 95 machine using the Windows 95 built-in single-line remote network server; dial-in to remote access server products such as those from Shiva Corporation and others; simultaneous support of the NetBEUI, IPX, and TCP/IP network communications protocols and dial-in connection using the popular PPP standard.

The image on the viewer screen stays synchronised

Our design allows it to detect screen changes in real time and transmit them to the remote viewer as they occur. Consequently, the image on the ReachOut viewer screen stays synchronised with the user's keyboard and mouse actions.

Stac claims that alternative software saves up screen changes and sends them at intervals, causing the viewer screen to lag behind what the user is doing.

Wireless mobile data services - By Philip Manchester

Mobile workforce guarantees more growth

Many companies are looking for less expensive alternatives to the advanced digital network services

If there were such a thing as the "ether", then it would be overflowing by now. The ancient idea that the world was surrounded by a mythical substance called the ether is, of course, as plausible as a flat earth. But if it did exist, the ether would be in short supply. It would be full of radio waves, TV signals and microwaves.

An ever-growing volume of communications now takes place without "wires" and there are signs that the trend will continue. An increasingly mobile workforce and a demand for wireless communications services guarantees continued growth.

There are several different

markets for wireless communications services - ranging from mobile cellular telephones based on expensive digital radio networks to low-cost, data-only services based on established analogue systems. While the advanced digital network services generally attract more attention, cost is an important factor and this is leading many companies to look for less expensive alternatives.

"We can set up a base station for about £25,000, which keeps our costs down and lets us offer fixed rate subscriptions to our customers," says Mr Richard Harris, managing director of UK services supplier Cognito. "Our competitors need about £100,000 to set up a base station and a full-function cellular telephone network costs about twice that."

Cognito, set up as privately-financed management acquisition from TI Group in 1992, specialises in data-only wire-

less services using a proprietary digital networking technology aimed at field service engineering operations. Customers include Bank Xerox and Philips Medical Systems.

"We charge a fixed rate per unit of £50 a month, which means the customers know exactly what their monthly costs will be. We can also link to other networks such as Orange and Cellnet if the customer wants the facility," Mr Harris explains.

Typically, users of the Cognito service buy what Mr Harris calls an integrated solution. Cognito provides the radio network - covering 85 per cent of the UK - and the mobile terminal. The customer provides the application systems.

"We have experience staff who can integrate the radio system with existing applications. This means a field engineer can receive details of work to be done through the mobile terminal and can notify

central control when the job is complete. Engineers can also order spare parts through the terminal," Mr Harris says.

The main advantage of this approach, he says is that it removes the need to keep a large number of staff at the company base, making and receiving telephone calls - again reducing costs.

There are other advantages: "Much of this sort of work involves transposition of data. A call from a customer is taken over the telephone and the despatcher phones the engineer who writes down the details. On completion of the job, the engineer then notifies the central control by phone."

"But with mobile data services, the data need only be entered once when the customer makes the original call," says Mr Harris.

National Band Three (NBT), another UK services supplier, takes a similar approach - but uses mature analogue radio networking. NBT's customers

include TNT Express, Boots and the British Waterways Board. "Mobile communications is about improving productivity and customer service. If you can despatch jobs through a wireless data service, you can cut costs and improve service," says Mr

By using analogue radio technology, NBT can offer voice services alongside the data services

Nigel Rodliffe, marketing manager at NBT.

NBT, like Cognito, covers most of the UK. But by using analogue radio technology, it can offer voice services alongside the data services: "We have developed a way of integrating voice and data and can keep costs down for our customers," says Mr Rodliffe.

NBT charges a fixed tariff of £63 a month for each subscriber. An initial set-up cost of £199 covers the radio terminal and NBT also offers a special customised Palmtop computer for data processing at a cost of £299.

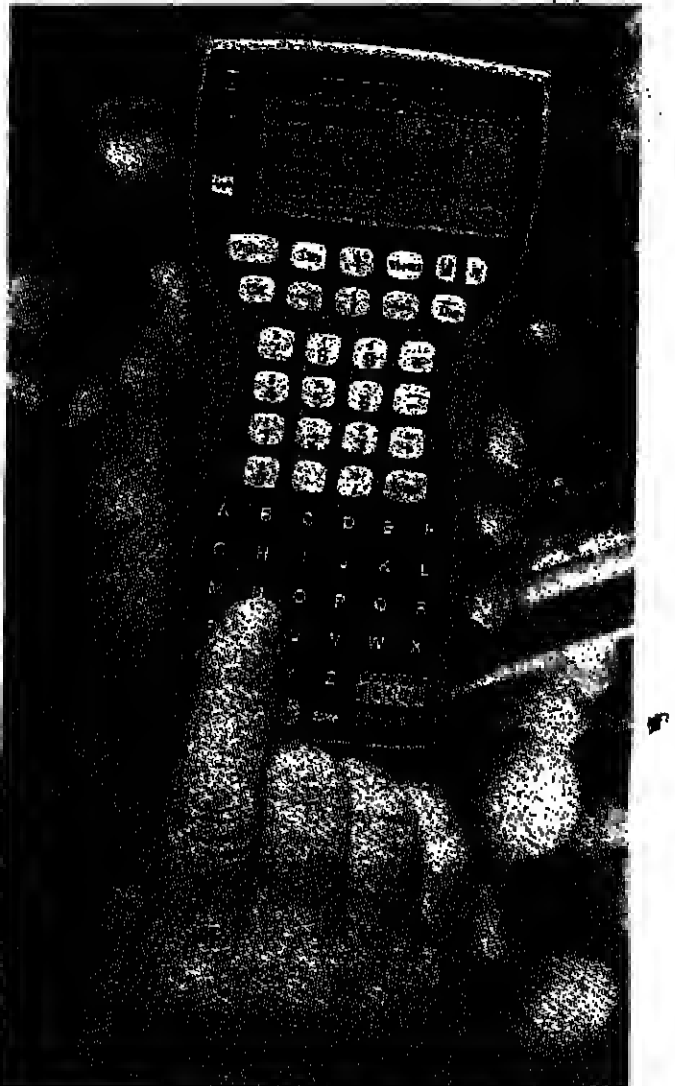
"Our aim is to combine technologies that can be adapted

to the way an organisation works. This means that we can link up with other computer applications the customer might have - for job despatch, fuel management and global positioning systems for vehicle location applications, for example. And if they have a Microsoft ODBC application, we can link to that as well," says Mr Rodliffe.

He adds that the analogue radio technology, while not necessarily the most advanced, is reliable and robust: "We are not ground breaking in terms of technology. But we are working on making the idea of plug-and-play low-cost radio communications a reality. In our target market, speed is not essential and our technology is very cost effective."

Mr Rodliffe adds, however, that NBT has plans to introduce digital networking in the near future.

Cognito and NBT both face significant competition from high-profile suppliers such as Cellnet, Vodafone and Orange as the demand for wireless communications grows. They remain confident, however, that their pragmatic approach assures them of a healthy market for some time to come. Mr Harris notes, for example, that his company is on target for 50 per cent revenue growth this year. He expects annual turnover to increase from £4.2m in 1994-95 to £6m in 1995-96.



NBT offers a customised Palmtop for data processing

Data cards and GSM - By Rod Newing

Data unleashes the power

Data services have only been available for 12 months but they could become an essential business tool

The handset looks and feels like a telephone, but it is really a four-platform terminal encompassing voice, data, fax and short messages," says Mr Simon Farr, product manager for mobile data products at Mercury Communications. "Data unleashes the power of the digital networks, so there is no reason not to be a member of the data community."

A cellular data card fits into the PCMCIA slot on a personal computer. It has a short lead which connects it to a cellular telephone handset to provide wire-free data communications from a mobile computer. A data card performs a similar function to a traditional modem, allowing the business traveller to send and receive electronic mail and faxes, connect to his or her corporate network, use public servers and databases and access all the resources of the Internet.

Mobile computer users can do this wherever and whenever they want to, free of telephone sockets. Because hotel telephone surcharges are so high, the mobile is often a cheaper alternative to using telephone sockets in a hotel room - and solves the problem of incompatible modem leads.

Adoption of cellular data services is likely to be speeded up by the availability of new lightweight computer terminals for executives who do not want to have to carry a bulky notebook computer about just to keep in touch with their e-mail.

The arrival of the mythical mass market personal digital assistant is still awaited, but in the meantime Hewlett Packard has announced the HP OmniGo 700LX Communicator Plus. This integrates the HP

200LX palmtop PC with a Nokia data card.

The Palm Series 3a will connect through a special combined battery and data card attached to the handset to give short messages, and e-mail is coming shortly. In future, an infra-red connection will replace the cable and allow the data card to be carried in the handset, allowing lower voltages to be used in hand-held computers.

Nokia has approached the problem from the opposite direction, by announcing its 9000 Communicator, which adds a personal organiser to a handset. The casing opens out to reveal a small screen and

GSM, used extensively in western Europe, is spreading to other parts of the world

keyboard. Very importantly, both the 9000 Communicator and OmniGo 700LX will link to a PC to allow users to transfer their data.

"Products like the Nokia 9000 will take us into a whole new world of mobile communications," says Mr Nick French, PA Consulting's global head of mobile communications. "It means that as long as I am in a GSM coverage area, I can communicate data from the phone without taking a PC. We will see more examples of this type of product to support data services."

"From the service providers' perspective," he continues, "they should stop providing huge subsidies to the man in the street for his wife to make the occasional telephone call while shopping. Instead, they should subsidise the costs of these appliances and their associated data services. The usage is much greater and they

could generate more call time. It is a benefit to the user to get data remotely to increase productivity, the operator makes more money, and everybody wins."

Global System for Mobile Communications ("GSM") is an international digital cellular radio standard which is used extensively in western Europe and is spreading to other parts of the world, being adopted by systems in more than 100 countries in total. However, the US and Japan are using several different standards and even their GSM systems are not always implemented in compatible ways. In Europe, PCN standards, such as Orange and Mercury One-2-One, are being implemented which are not compatible with GSM.

In an increasingly global business environment, this means that the data services may not yet be available in important areas to which the user travels. Roaming agreements only work between systems using the same standard, so the solution is that manufacturers will produce terminals with multiple nodes built in, capable of supporting each of the main systems.

"The US imposed an analogue standard, built a good system and exported the technology, but they have opened up their frequency to any digital technology," explains Mr Martin Garner, managing consultant for mobile communications at Ovum, the research analysts. "Standards give economies of scale for handsets and network equipment, so the manufacturers are happy to invest. Europe has learned the lesson and is standardising on GSM, just as the US is unlearning its lesson by creating uncertainty for manufacturers."

Data services provided by GSM systems can offer high performance with exceptionally few errors, but only at rates up to 9,600 bits per second. Higher rates are available with compression and slow-

scan TV has been demonstrated over GSM. This rate, which compares with the 28,800 rate of the latest modems, will be noticeably slower than users have come to expect from their home and office connections.

The constraint is the network, not the data card, so the solution to this will be to use several connections at the same time, known as "multislot" - a many as seven connections can be used and Nokia has demonstrated data transfer at 28,800 using three connections. "The network providers are still two years away from offering this facility, but they will get there," says Mr Mark

There is still a problem of where to get expert support for older machines

Squires, manager of cellular data for Nokia, the world leader in data cards.

"The networks are still polishing their data services, but they will get more aggressive for the business user," says Mr Squires.

"Growth so far has been faster than expected, because Windows 95 'plug and play' has helped to get the technology from early adopters to the average executive user."

However, Mr Garner warns that there is still a problem of where to get expert support for older machines, because cellular retailers have little computer expertise.

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TECHNOLOGICAL CONVERGENCE AS VIEWED BY ITS LEADING EXPONENTS

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2025/10/15/20

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International perspectives

Taiwan - By Michael Dempsey

IT is key to economic success

PC-maker Acer is the eighth-largest computer brand in the world, employing 25,000 staff at 50 sites around the globe

Taiwan's blue chip-weighted stock index posted its biggest one-day gain in two years at the beginning of April, triggered by news that Wall Street investment firm Morgan Stanley might be about to follow Dow Jones and place Taiwan's index on its worldwide indices.

The US - By Malcolm Wheatley

Superior results for democracy

PeopleSoft, which markets a range of client-server enterprise applications, is listed as one of the fastest-growing companies in the US

In the leafy California suburb of Pleasanton, a business park that was constructed in more prosperous times by downsizing telecommunications giant AT&T now has plenty of vacant space.

Listed by Fortune as one of the fastest growing companies in the US in 1994 and 1995, the nine-year-old company markets a range of client-server enterprise applications that is rapidly gaining it a big slice of the market.

PeopleSoft represents a personal crusade by Mr Dave Duffield, its president and chief executive officer, to create the kind of corporate culture that

he feels best suits software companies - if not the corporate world in general.

Mr Duffield, a 30-year veteran of the California software industry, vowed when setting up PeopleSoft that he would avoid all the mistakes that he had seen in other companies.

"Too many companies have too many people that have lost sight of the mission," he says, recalling bitter internal battles and corporate politicking.

The company's annual report lists the name of every employee, and is illustrated with photographs of many of them - as are the walls of the office building.

The timing of the surge, coming just after menacing Chinese military manoeuvres put Taiwan in the headlines, proves that Taiwan's economy has developed to the stage where it can weather the threat of war.

IT supply is a backbone of this economic success. Taiwan now produces 80 per cent of the world's computer keyboards. Half of all PC monitors are made in Taiwan.

Mr Duffield points out that he runs the company in this way not because of some deep-seated belief in industrial democracy, but because he believes that it will produce superior business results.

Although the company now has a range of integrated applications that includes accounting, manufacturing and distribution functions, "human resource software was what I knew, so that was where we started," says Mr Duffield.

Every year, each corporate user is given a number of votes - known as PeopleDollars - according to the number of software licences they have.

Priorities for proposed enhancements are based on the PeopleDollar votes that each enhancement receives.

Mr Duffield professes to subscribe to a management theory that reckons that companies can focus on either product innovation, customer service or operational excellence - but that focusing on more than one of these at once is extremely difficult.

One consequence has already become apparent. Despite a move to new premises, employee growth continues to outstrip available space: PeopleSoft is expanding faster than AT&T is contracting.

is acutely aware that while IT can provide a powerful economic stimulus, it is a terrifically competitive sector.

Tom Lin, a 61-year-old former air force engineering officer is now 23 years into his second career - promoting Taiwanese products as deputy secretary-general of Cetra, the island's external trade council.

The second dilemma is quality. How can Mr Lin and his colleagues convince the outside world that their country is not a bargain basement site

turning out goods that do not match Japanese specifications? Mr Lin is frank about the way Taiwan entered the IT market: through contract component manufacture rather than innovation.

Now the imaginative edge is returning, claims Mr Lin. In the world of the Asian Tiger economies, Taiwan occupies a position between Malaysia, with low labour costs, and Japan, where the brainpower needed to fuel an IT industry is more expensive to recruit.

Taiwan is fighting its down-market image through a scheme intended to reward quality and innovation. The

National Award of Excellence grants manufacturers the right to use a national symbol of excellence on their goods.

These are hardly sums to set corporate hearts beating, but a lot of organisations qualify awards. In the most recent round, 216 companies won an award, out of a field of 600.

Cetra works its 700 employees hard. "We have 25 trade shows in Taiwan and we attend 90 all over the world," says Mr Lin.

Mr Lin is visibly proud of his nation's fledgling democracy. He compares the current debate about the Internet and



Tom Lin: he says 5,000 IT professionals recently returned to Taiwan

For Taiwanese IT specialists, Japan remains the big question. In 1995, Taiwan had a \$17bn trade deficit with Japan, importing \$30bn worth of goods and exporting \$13bn of its own products.

Like any merchant adventurers, Mr Lin and his Cetra colleague Mr Bret Lee travel with a range of gadgets intended to impress overseas audiences.

"We can improve technology and apply that advance in a way that is affordable in the market," Mr Lin declares, brandishing the Sidex machine. And his efforts are paying off.

In Taipei, First International Computer is attempting to emulate Acer's achievement, producing more than 100,000 desktop and notebook PCs a month.

A small island accustomed to strutting off bullish behaviour from powerful neighbours clearly has a lot to offer the IT world.

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Advertisement for NCR featuring a circuit board background, the text 'We can help you get to know your customers better than anyone else on earth.', 'But how well do you know us?', and the NCR logo.

Vertical text on the left edge of the page, including 'AY I/THURSDAY MAY 2 1996', 'mobile computing', 'ortunity', 'on', 'ed', 'ne power'.

IT outsourcing By Nuala Moran

Rumble of discontent from clients

The report found that one-third of organisations rated the problems of outsourcing as outweighing the benefits

PA Consulting has picked up a rumble of discontent from customers in its third annual survey of outsourcing, due to be published later this month.

"Even some big companies are starting to say we are not getting the attention we expected," said Mr John Little, one of the report's authors. "There is a limited amount of talent around and the explosive growth of outsourcing is spreading it more and more thinly across more and more contracts."

The report, which surveyed attitudes and experiences in France, Germany, Denmark, Hong Kong, Australia, New Zealand, the UK and the US, found that one-third of organisations rated the problems of outsourcing as outweighing the benefits. And while two-thirds perceived more benefits than drawbacks, the survey concludes that only 5 per cent of the organisations are achieving the level of benefits which are potentially available.

More than 1,000 directors and senior managers were interviewed.

Part of the mismatch between expectation and reality is caused by what Mr Little characterises as the "A Team-B Team syndrome", where the A team makes the sale and the B team does the work.

"The members of the supplier team who do the work on designing the solution and promoting this to the customer generally move on once the contract is signed. The implementation team rarely have the same enthusiasm for new approaches, or expensive new skills, particularly where these carry any risk to the supplier's financial performance," said Mr Little.

"While the sales team may (or may not) be acting in good faith, they do not have the operational clout to enforce the 'sold solution' by the same token, senior management attention on the customer side moves on once the contract is set up.

The root of the problem lies with the nature of outsourcing contracts which, in general, deal only with the delivery of services. "They fail to include any definition of the relationship - in other words how the customer and supplier will work together to ensure that the benefits are delivered."

Customers are looking for



John Little: "There is a limited amount of talent around"

innovation and added value, and they expect suppliers to come up with ideas on how to achieve this throughout the life of the contract.

"Many of the interviewees reported that one of the most convincing arguments in the outsourcing sales pitch was: 'We have better ways of doing things; we have the skills; we have the technology,'" said Mr Little. The reality proved somewhat different.

"Even if the supplier did have the skills and technology

it did not have enough to go round all its customers, and only those who had the foresight to make this a contractual obligation or were too big to ignore, actually got what they were buying - and then sometimes with a struggle."

But whatever the problems, there is clear evidence from the survey that outsourcing will continue to grow. "The move to outsourcing is not about fashion or political drivers. It is about a new way of doing business," said Mr Little. "There is unrelenting growth regardless of sector, and the trend is universal."

In the 1994-95 survey, 26 per cent of respondents said they would bring IT back in-house if they could, or that they wanted a divorce in order to re-marry a different supplier. But when surveyed for the 1995-96 report, none of these companies had made such a change.

While PA Consulting's two previous surveys showed that cost-cutting was the main motivation for outsourcing, companies now say that activities which are not part of their competitive positioning should be outsourced to suppliers who are "the best of breed" in each particular activity.

"Obviously, people are not going to outsource if it costs them more, but they have started to look for other bene-



More than 1,000 business leaders took part in a recent survey

fits as well," said Mr Little.

When asked to select three out of 11 statements which gave the best description of their organisation's view of outsourcing, 50 per cent said: "We outsource when others can do it better", 35 per cent said: "We outsource to focus on our core business", and 32 per cent said: "We outsource to reduce our cost base."

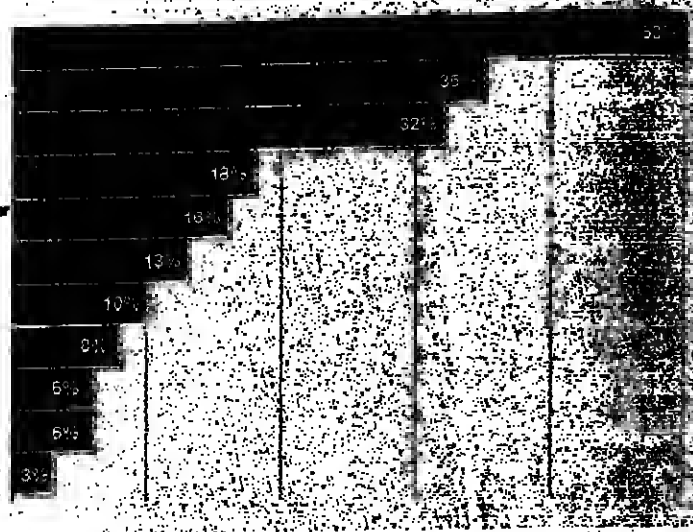
The bias to outsourcing for tactical reasons is common to all the countries surveyed.

One consequence of outsourcing for tactical reasons is that there is a trend away from handing IT over to a single supplier, towards using multi-

Views of outsourcing

- We outsource where others can do it better
- to focus on our core business
- to reduce our cost base
- to improve productivity and responsiveness
- specialist services we have never provided ourselves
- to gain competitive advantage
- activities that become too complex for us to manage
- because we are under political pressure
- to get rid of internal problems
- to increase shareholder value
- anything that is not core to our business

Source: PA Consulting



ple suppliers with expertise in particular technologies. "There is a recognition that the supplier which is best at supporting PCs is not the best at managing wide area networks or corporate servers."

This shift has raised a different problem: how to get suppliers to co-operate to deliver a seamless service. While it was claimed that suppliers oversold their ability to contract or partner with other suppliers, many interviewees had to admit ruefully that they had not done their homework on establishing whether the mechanisms to do this were actually in place. "Two bottom lines inevitably means problems" was a common comment, said Mr Little.

To overcome such difficulties, the smart companies are

setting up overarching agreements which stipulate how the various suppliers must work together. "If the suppliers don't agree, they can't join the party."

This in turn is leading to significant increases in two more sophisticated kinds of business relationship. The first is a consortium of suppliers working together to fulfil a contract, the other is the joint venture between the supplier the client.

The survey found a common view across countries and industry sectors that to obtain the full benefits of outsourcing on a country-by-country basis to global outsourcing.

"This appears to be based on the expectation that supplier

capacity will grow in line with demand," said Mr Little.

But, he points out, at the moment there are very few suppliers capable of designing and delivering service solutions on a consistent international basis.

Even among these, many have grown through acquisition, which is not a good guarantor of consistency of approach.

"The market for global outsourcing is currently too immature to deliver the levels of benefit which it should be possible to achieve through taking an organisation-wide view."

International Strategic Services, Surrey 1996. PA Consulting Group, 123 Buckingham Palace Road, London SW1W 9SR. 0171 730 9000

Digital photography By Geoffrey Wheelwright

Prices are dropping

The picture files can be transferred from the camera to a desktop computer for use in desktop publishing and image-editing

Digital photography is suddenly becoming much more affordable. A few years ago, you would have had to pay as much as \$20,000 for the honour of using a digital camera, but prices for the most recently-released digital cameras are dropping rapidly - with a wide range of choice for less than \$1,000.

These new hand-held digital devices offer an easy way to get pictures into your computer without requiring the use of a scanner, an outside agent or any extra equipment (other than what you get when you buy the camera).

Traditionally, you would have to either obtain pre-scanned photographic images on a CD-Rom (by paying someone else to have their film processed onto a Compact Disc using Kodak's PhotoCD system) or buy an image scanner to "photocopy" images into the computer for editing and placement.

Both processes have been time-consuming, expensive and frustrating - particularly for users who only need to add simple "work-a-day" photographs to their insurance adjustment forms, real estate sheets, product catalogues and design mock-ups.

Enter the digital camera. These new devices allow users to shoot images directly and store them on files within the camera. The files can be transferred to a desktop computer for use in desktop publishing and image-editing applications.

One recent entrant to this growing market is Japanese electronics giant Casio - which has launched two digital cameras in the past six months. The cheapest of these is the QV-10, a hand-held digital still camera that allows images to be viewed as they are shot, thanks to a high-resolution active matrix 1.8-inch LCD colour screen.

The images can be subsequently transferred to a personal computer using connection kits which will work with both Microsoft Windows and Apple Macintosh operating systems. Images can also be output to a video source such as a TV or VCR, using a video cable. Connection kits and cables come with the QV-10.

The camera was launched at a price of \$995 and made available at many computer outlets and office super stores in the US, enabling Casio to enter the consumer, small office-home office (Soho), vertical, and personal computer markets with something a little different.

"There are a whole world of opportunities for the Casio QV-10 LCD digital camera," says Donnie Coffelt, Casio's US vice-president of marketing, "and we look forward to bringing colour digital imaging technology to a whole new segment of the market. The QV-10's built-in colour LCD high-

resolution screen, connection ports for PCs-video devices, and large image memory area are all in keeping with Casio's philosophy of bringing affordable high-technology products to consumers." Casio says it also intends to market the QV-10 to vertical markets such as insurance and real-estate, in addition to the large PC and consumer markets.

Meanwhile, Apple Computer is still in the digital photography business following the launch late last year of the QuickTake 150 - a hand-held camera that looks like a cross between a pair of binoculars and a small spaceship. It weighs slightly less than 1lb and provides the ability to store up to 32 "standard resolution" pictures or 16 of "high resolution".

Once again, these image files can be transferred to either Apple Macintosh or IBM-compatible computers running Microsoft Windows, then placed in publishing or image-editing packages. The camera also uses standard rechargeable AA batteries, so users can buy and use ordinary AA batteries if they have not got time to recharge between uses.

The camera holds its images in computer memory while the battery is changed so that users do not lose any pictures they have already taken.

Some photojournalists and newspapers have already started using digital cameras in the field. Life newspaper reporters, the photojournalists are now able to send their work as computer files via "modems" over telephone lines.

Unlike the 1980s, the mid-1990s are seeing determined efforts to establish standards and bring order to the market

The recession and subsequent recovery are proving to be among the best things that could have happened in IT contract staffing, not only for the surviving agencies and contractors but also for IT managers desperate to fill skills gaps.

The 1980s and then the recession saw companies shifting emphasis increasingly from permanent to contract staff but at the same time brought in small agencies keen to make a fast buck. This tarnished the already less-than-perfect image of the business.

The early 1990s brought a market shake-out and growing demands from customers for higher standards as they saw that their future would lie more and more with contract staff.

These developments are now leading to important change, with leading agencies, their staff and individual contractors seeking not only to set professional standards but also to work with customers on new ideas in areas such as training, forward planning and mutual commitment.

Such developments are important in the light of trends towards contracting. Research by recruitment group Delphi shows that almost two-thirds of IT departments use contractors. A fifth of the rest expect to turn to contractors in the next two years, while almost 60 per cent of existing users will use them more.

These findings are reflected in the take-off of contractors' pay in the past 18 months. Recruitment firms CSS Trident and Software Personnel say rates rose by just over 5 per cent in the 12 months to June 1995, including a 3 per cent increase between January and June. The pace increased further in the second half, taking the average increase to 11.6 per cent for the whole of last year.

However, unlike the 1980s, the mid-1990s are seeing determined efforts to establish stan-



Julia Robertson: 'Agencies are ensuring that their staff are better trained'

dards and bring order to the market.

The Institute of Employment Consultants, representing individuals working in job agencies, has been promoting itself hard in the IT market. The institute has a code of practice and courses and examinations leading to its own qualifications. It has run a big promotion campaign in the past 18 months, with initiatives on age discrimination and the employment of disabled people. Membership has increased by a fifth to 3,500 and training income has grown eight-fold.

It has just launched an advertising campaign which tells employers and job hunters to favour agencies with staff who are institute members. The campaign is part of an attempt to improve standards.

Mrs Julia Robertson, the chief executive, says changes last year to the legislation governing job agencies have focused attention on professional conduct. "Agencies are now ensuring that their staff are better trained and more aware of their legal and professional obligations to candidates and employers," she says.

"Our new campaign will not only help people find quality service but will also have impact on recruitment staff who are not yet members."

Her views are supported by

code says agencies must not send a CV to employers without the applicant's permission.

This prevents an employer getting the same CV from different agencies, an issue which has long upset contractors because managers who receive two identical CVs usually throw both away.

The Independent Computer Contractors group's support includes encouraging its 350 members to use job agencies which belong to the federation.

In addition the group, which is also writing its own code of practice, has launched a CV faxing service for its members, which again focuses on recruitment agencies in the federation. Contractors can send their CVs to the specialist group's administrator with a list of agencies to contact, and the document is passed on by fax.

Mr Mike Cullen, the group's chairman, says the service ensures that reputable agencies are supported and saves contractors the time of checking which agencies are members of the federation. Contractors can ruin their chances of winning a job if they unwittingly send their CV to a non-member, he says.

The federation's most ambitious project, now under discussion, involves reaching agreement with employers on their skills needs and arranging training for contractors. Employers would have to give contractors the chance to gain experience in their new skill, and contractors would have to commit to working mainly through certain agencies.

One proposal is that federation members could share training costs in exchange for guarantees that the contractors would only work through these agencies. The training would be based on employers' needs, so in return these employers would have to be prepared to give contractors the chance to use their new skills.

Contractors might have to agree to give priority to the agencies that were supporting them in their training.

The plans are still in their early days but all these developments of the past two or three years reflect the industry's acknowledgement that its reputation from the 1980s has had to change.

People and skills: IT contract staffing By John Kavanagh

Reputation had to change

London symposium on the future of desktop computing

A European audience of directors and senior personnel from the IT-user community will hear an impressive line-up of speakers taking part in InterForum 96 in London on Friday, June 7 when the theme will be "The future of the desktop - business strategies for the network-centric computing era."

Mr Peter Bowfield, chief executive of British Telecom and chairman of ICL, will deliver the opening keynote address. The closing address at the televised event at the Queen Elizabeth II Conference Centre, Westminster, will be given by Mr Larry Wilson, chief executive and president of Oracle, the software company.

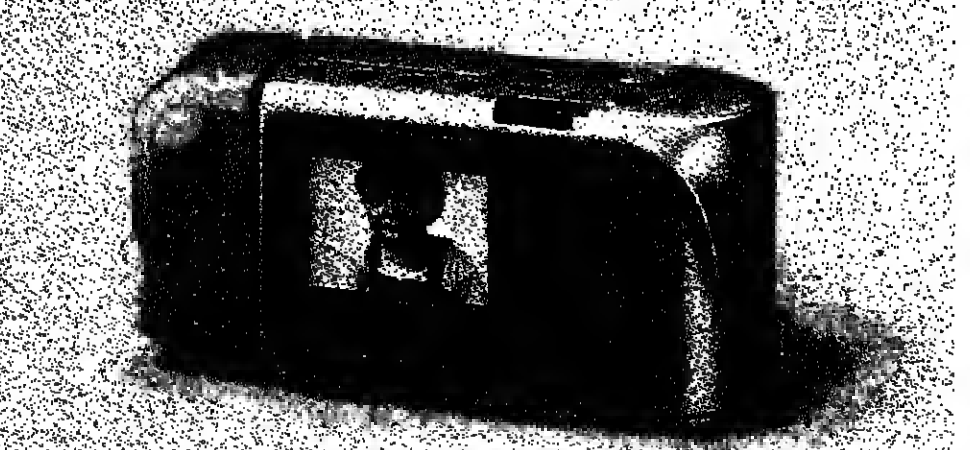
InterForum 96 marks the launch of an annual IT symposium by Uniforum UK, in association with the Financial Times. Uniforum is a non-profit organisation with more than 1,200 members spanning the vendor, user and central government communities.

The one-day event will also address an international audience via the FT Television service which is available to TV stations worldwide.

Other speakers will include Mr Irving Wladawsky-Berger, head of IBM's Internet Division, Mr Philip White, chief executive and president of Informix Software, Mr Keith Todd, chief executive of ICL, Mr Javid Aziz, European vice-president of Silicon Graphics, Mr Gene Barman, general manager of Desktop Systems Group, Sun Microsystems, and Mr Peter Martin, editor of the international edition of the FT. Speakers' views will also be available on the Internet via the FT Web site.

For more details of the event, contact Mr Philip Flaxton, executive director, Uniforum UK, 9-11 EBC House, Richmond Station Buildings, Kew Road, Richmond, Surrey TW9 3NA, tel (+44) 181 332 0446, fax332 (+44) 181 332 0448.

The FT-IT Review in June will also examine business strategies for the network-centric computing era.



The Casio QV-10 hand-held digital still camera allows images to be viewed as they are shot

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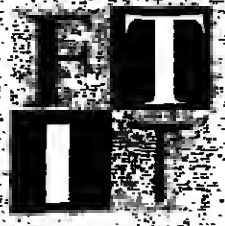
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السنة الأولى 1996

Overview By Paul Taylor

Learning to live together

Some analysts are predicting that CTI and other sophisticated call management techniques will be among the main drivers of computer sales by 1999



Directions
Computer Telephony Integration (CTI) promises to transform business communications.

The digital worlds of telephony and computing are on a collision course which promises to transform business communications and redefine the relationship between traditional telecommunication equipment vendors, computer and networking groups and software specialists.

Computer Telephony Integration (CTI), although still in its infancy, is a rapidly expanding market which is already generating innovative business applications and helping companies to improve customer responsiveness, productivity and efficiency.

communications servers in a client-server network are evaporating. Coupled with a move away from proprietary systems and towards open standards, this has ignited the interest of both applications developers and potential users in CTI.

with 600,000 operators. In the UK, there are just 17,000 CTI users and these are almost exclusively call centre operators, however this is expected to explode by the year 2000. By this time, BT predicts that call centres will represent only about 12 per cent of the UK market in CTI as more and more use of CTI is made for office automation and personal productivity.

"CTI is the next logical step for call centres," says Mr Chris Ellis, marketing manager for GPT Communications Systems in the UK, who estimates that up to 60 per cent of CTI sales today relate to call centres. Most call centre users graduated from Automatic Call Distribution (ACD) telephone systems which have been around for about 30 years and which route calls to an appropriate operator or "agent".

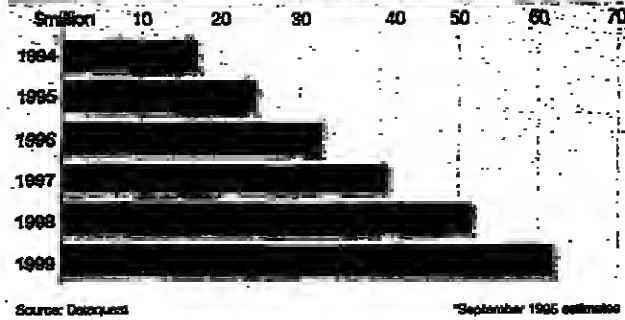
Information about the caller can then be sent to an agent's computer screen - sometimes before the caller is even connected - using a technique called "screen popping". Employing CTI in call centres can improve customer service while cutting costs and improving productivity. "CTI which enables 'screen popping' is already becoming a key differentiator to ensure customer loyalty in today's highly competitive market place, where the whole concept of business is being reviewed across all industry sectors," says Mr Gordon Loader, UK marketing manager for Aspect Telecommunications, a leading ACD vendor.

CTI can also be used to help manage outgoing calls and optimise a teleshop operation using a technique called predictive dialling which automatically calls customers or prospective customers using a database and statistical algorithms to reduce the risk that there will be no free agents available to deal with a successfully connected call.

"At the heart of any predictive dialling solution is its pacing algorithm," says Mr Robert Schwartz, director of European sales for EIS International. "This algorithm monitors and controls many variables in the call centre, such as the connect rate, average call length and customer wait time."

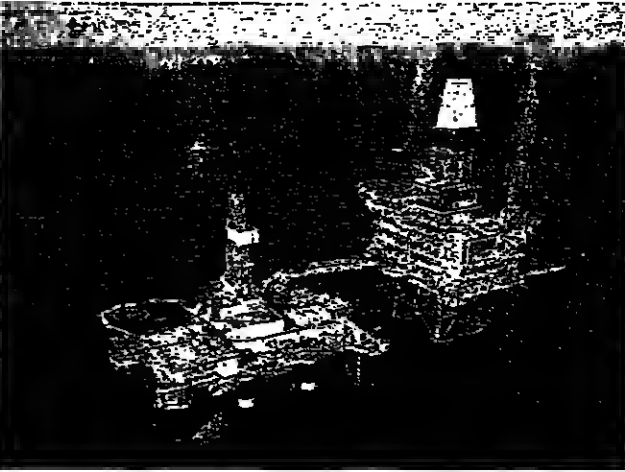
Other CTI applications include audio-text services such as weather or traffic forecasts and fax-back services where callers can use a touchtone telephone to request information which is then sent back to them via a computer-generated facsimile.

Interactive voice response systems-UK



Another fast-growing group of CTI products, sometimes called intelligent office systems, are aimed at departmental or work group applications where they help support teleworking, "hot-desking" or simply ensure that customers dialling a single number reach the right employee no matter where they are.

Microsoft is encouraging developers to write CTI applications and independent specialists. However, the potential of CTI to transform the workplace has recently attracted the attentions of others including software groups such as Microsoft and Novell. Microsoft in particular sees desktop CTI as a personal productivity tool to be integrated into both home and office.



CS of Cambridge has installed an emergency mobilisation system in the North Sea for Total Oil Marine. The system uses Dialogic computer telephony technology.

are lots of factions in the market with different agendas and results in lots of flux in factio standards. In an effort to address these issues, some of the largest suppliers in the business have a desktop CTI produced in the US designed to work with pro-interprise Computer Telephony Systems (CTS) plug-in Phone Blaster telephone management system.

By using APIs, independent application developers such as London-based Virtual Office Company argue that "the power of the PABX, previously hidden away in the basement, can now be delivered to the desktop through the PC which is known and understood to the users. This way, the investment which organisations have made in telephony can finally deliver very significant productivity and customer service improvements."

Most analysts believe the increasing power and flexibility of computing products will mean that they will continue to eat into the traditional business of the telecommunications equipment vendors. Some, like Mitel, have already begun to respond.

Mr Keith Clarke, a consultant with CMG, the computer services group, notes: "There is a convergence and user-preference for the telephone will, however, ensure its survival as an essential communication tool for the foreseeable future. In order to maximise effectiveness of customer services, while providing a sufficiently personal service, the telephone and CTI must then learn to live together."

Applications Rod Newing looks at innovations by Novell and Lotus

Global networks are new business model

"The telephone companies have access to every business and consumer in the world and have billing arrangements in place with them. By working with telephone companies we can offer more services and charge for them using their central billing." This is Novell's vision of the future, as outlined by Mr Lalit Nathwani, their senior brand

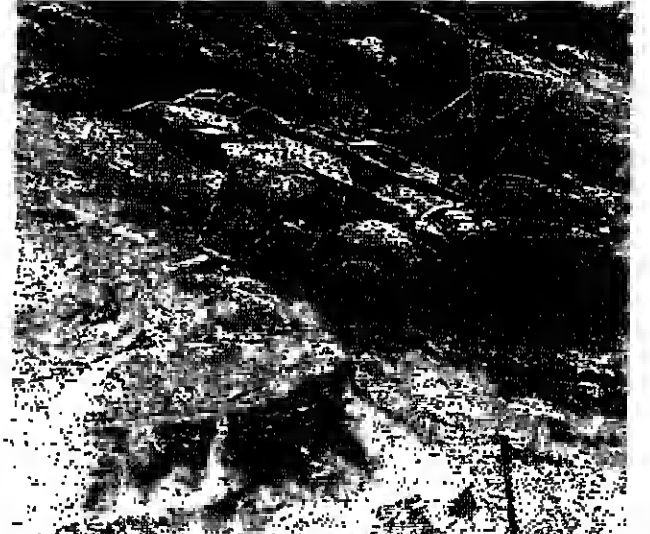
marketing manager. IT companies, such as Lotus and Novell, are busy building global networks in partnership with telephone companies. This represents a new business model for the industry and is consistent with the current vision of network computing as the future of the industry. Users access the Novell and Lotus

networks through their local telephone company. There will no longer be a need for the wide area network or even a local area network. Documents, databases, applications and Java applets can be stored on public servers provided by the telephone company, such as those provided by BT in partnership with Hewlett

Packard. In the case of Novell, the telephone company can bill the user for all charges incurred while connected to the system. This will cover the normal communications charges for connection, as well as charges for using the value-added service which the network itself provides, such as a global directory, secure transactions, immediate

response and continuous availability. The bill can also include charges for use of software and applications on the network servers. These may be either public servers or any private server attached to the network by an organisation, including the Sun NetWare servers already in existence. This could include the use of applications, Java applets or other objects, and information, files and goods purchased via the system.

"This provides a secure managed alternative to the Internet, with a global directory to help users find the information, services and sites they need," says Mr Nathwani. The infrastructure which underlies the Novell network is provided by Netware and GroupWise, so Novell expects to receive a percentage of the billings made by the telephone companies. The exact amount



An artist's impression of RAF Toronton's Air Hawk mission. Hughes (UK) chose BT Network for Lotus Notes to link its 5 Team Air Hawk business partners throughout the UK in their bid for a 285m defence contract.

alternative to the Internet, they will pay the telephone company and will never know how much goes to the IT company. If they get this right, users will gain - and it could be a licence for Novell and Lotus to print money!



CAE STUDY Voice messaging

Police test neighbourhood links

Voice messaging often seems to the rural public to be the unobtainable face of information technology. Wherein the old days you could take a receptionist or secretary get a straight answer, it a computer stands in its way. Properly fitted, voice mail can ease communications. British police forces are adopting it help them work more efficiently with the public to berline. Staffordshire Police, for example, have recently installed a system from the US company Octo communications neighbourhood watch schemes. The team is being tested with two co-ordinators by Leek and Tunworth area.

It will call the ordinators automatically at the time of day when they are said they should be available and will keep calling until contact is made. When the phone answered, the system will introduce itself ask for a PIN number (personal identification number) to be input before it gives the latest local information. Superintendent Lovell says: "This is a full automated system, and is something quite new for the police. It should not only save a lot of time in coming people but also ensure that the same message is delivered to everyone." In the past, messages have been passed from one person to another and have been embellished in the process. If the experiment is successful, he hopes to use the system to cover early warnings of trouble, such as shoplifting gangs or foot

hooligans, and to improve the call-out for key individuals to attend important incidents. Staffordshire Police first installed its voice messaging system on trial in 1992 with 150 mailboxes. When this proved very popular, an enlarged system was installed in 1994 connecting 23 police stations. The move to bring in the neighbourhood watch schemes began in March. Other police forces are watching the Staffordshire experiment closely and some have already embarked on the same route. Northumbria police have also begun contacting neighbourhood watches via a voice messaging system. Superintendent Dennis Mitford, who was in charge of setting it up, says: "Calling all the contact people once a week is a huge task and anyway the information is out of date by that time." So last year Northumbria Police upgraded its Octel internal voice mail system to handle communications with neighbourhood watches. A pilot scheme showed very positive results, in delivering information to contacts more quickly and in saving time for officers, according to Supt Mitford. "It has been a success so far, but it is still early days," he says. "The system copes very well with 50 people, but I am not sure that it will be able to cope with expansion to 1,500 or 2,000." He would like to be able to encompass hotel watch and

farm watch schemes if the technology proves resilient. Voice messaging may have other advantages for the police. Answerphones have been found to be inflexible because they cannot give out complex information, cannot cope with receiving long messages and cannot forward messages. With voice messaging, many calls for information from the public can be answered automatically. Officers in remote stations can check their voice mail boxes for briefings instead of having to call a duty sergeant or travel to headquarters. The media can call to listen to the latest news. Members of the public can leave "tips".

George Black

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Into the future - By Rod Newing

Towards speech processing

Computer software is beginning to understand sounds, words and grammar. This allows it to process text, so that we can dictate and translate between languages

In a few years we will be able to speak into a microphone and see our words appear in a foreign language on a computer screen as we speak them.

This is the expected outcome from two separate initiatives in similar growing markets, which are voice recognition and language translation.

Voice recognition technology can be used to recognise spoken commands in order to control a computer by voice, allowing users to keep their hands free.

However, voice recognition is at its best when used specifically for dictating text direct into the computer.

Voice dictation systems have been available for about three years. They are intended for professional people who do not have the keyboard skills they need to touch-type. However,

the early applications have been in vertical markets such as the medical profession, where specific vocabularies have been created to allow staff to work with their hands free.

In general commercial offices, a number of pilots have been undertaken successfully. Large-scale roll-outs are just beginning to happen, with 40 or 50 users, and larger-scale deployment will follow.

"We are beginning to get bids for 1,000-user systems," says Ms Anne-Maria Derault, worldwide head of language solutions for IBM. "It has been spreading by word of mouth from happy users, but interest has now spread to board level." She estimates the total market at \$100m with a growth rate of 25 per cent per year.

Dictation systems still depend on users speaking each word separately and clearly in a monologue. The software uses a model of the user's voice pattern, together with spelling and grammar checkers, to recognise words and sentences in context. Users have to train the software to understand their voices by correcting errors through the system, which constantly updates the voice model. What users really want is

continuous dictation, but most of us are unable to speak without running our words into each other. "This merges sounds and creates ambiguity which multiplies the complexity," explains Ms Derault. "More computing power is needed to solve these problems, so it is still about three years away."

IBM is the largest participant

in the voice dictation market, but it is under pressure from Dragon. The IBM Voice Type Dictation system requires text to be recorded in a separate dictation window before being transferred to the appropriate application.

Dragon makes great play with the fact that its system allows the user to dictate direct into whichever applica-

tion they are using - although IBM resellers AllVoice have amended Voice Type to record direct into an application. Competing systems are also available from Kurzweil and Phillips.

Most of these systems work well with notebook computers, as well as desktop machines. Phillips have just announced their SpeechPad, a hand-held dictation unit with voice recognition built in, for downloading direct to a PC.

Software is playing an increasing role in the translation of text from one language to another, known as "machine translation."

"The technology is not perfect, but it gives an indication of the content of a document and therefore allows the user to decide whether it should be professionally translated," explains Mr Jim Lewis, president of Globalink, the world's leading supplier of translation services.

"For instance, a foreign e-mail can be sent to be translated automatically. If it is returned, the original can be sent to a professional translator."

Translation software, like voice recognition, looks at whole sentences, using algorithms to establish the mean-

ing of words from their context, so that they are translated intelligently, not literally.

"Translation by computer is difficult because human language is often complex and ambiguous," says Mr Martin Turner, managing director of CompuServe UK, which provides a service to its members. "Many words and phrases can have different meanings, depending on their context."

"Vocabulary evolves continuously, with new words being added, and others disappearing from common usage, and long and complex sentences are difficult for computers to analyse. As a result, the quality of translations produced by computers is much lower than human translations."

"However, machine translation can produce an understandable rough draft translation in a very short time."

With the arrival of the Internet, a large quantity of foreign language material is publicly available which needs to be translated, Mr Lewis points out that even people who speak English as a foreign language during the course of a day, prefer to read documents in their own language.

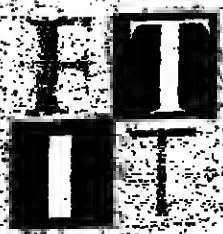
Machine translation is available over the Internet from several sources. Readers can assess its effectiveness free of charge by accessing <http://www.globalink.com>. The result will be e-mailed back within 24 hours without human intervention.

One problem with writing translation software is that of finding software developers to write it. "There are only about two dozen people in the world who are both good programmers and good linguists," Mr Lewis says.

Globalink is developing a new technology, code-named "Barcelona," to support its software products. Barcelona is a meta language which seeks to divorce sounds from words, allowing programmers and linguists to work separately.

"Software is good for casual correspondence or getting the gist of a document, but it was not designed as an outboard tool, except in the hands of a professional translator," Mr Lewis concludes. Nevertheless, he has a vision that one day a translation option will be installed on nearly every PC worldwide, and be used as commonly as spellcheckers are today.

When the voice and translation technologies converge, people without a common language will be able to communicate by speaking into a computer. This will be a wonderful use of technology.



Software at work Trends in voice recognition

It is just a pity that the industry has been unable or unwilling to develop a keyboard for professional users, instead of making us struggle with one developed for a typewriter.

Fortunately, this article was prepared with assistance from IBM's Voice Type Dictation System. It has not, however, been machine translated through a dozen languages and back into English, even though it may read that way!



Microline Engineering's MNet-Talker - a belt-worn voice recognition and speech synthesis unit coupled with radio terminal technology - can be used with hands-free bar-code scanning for order picking in warehouse and industrial applications. The voice templates of up to 100 individuals can be stored on a single terminal

SIPC By Gregory M. Hirsch

Riposte to Network Computer

The technologies of SIPC will make the PC platform the centre of entertainment, communications and productivity in home and office, says Bill Gates

something known as the OnNow design initiative for system-wide power management and instant accessibility. This will apparently mean that, unlike today's PCs, which can take minutes to boot up each time they're turned on, SIPC systems will be instantly available at the touch of the ON button.

It has only been three months since Mr Larry Ellison, president of Oracle, first sent a shockwave through the computer industry by showing off a prototype of a \$500 Internet access device - called the "Network Computer" - that he claimed could supplant the personal computer in popularity.

The merits of Mr Ellison's idea are currently being debated by pundits all over the industry - and in early April, industry leaders (including Compaq and Intel) made what could be termed an official response to it as they rallied around an initiative from software giant Microsoft.

Known as Simply Interactive PC (or SIPC) - and backed by leading computer makers such as Compaq Computer, dominant chip maker Intel and Toshiba - this effort appears custom-designed to meet and then beat the standards that Mr Ellison set for his network computer.

Microsoft chairman and co-founder Bill Gates unveiled this "framework of hardware technologies" for use with Microsoft Windows operating system-based personal computers as a full-scale riposte to all the talk of \$500 Internet appliances. According to Mr Gates, the technologies of SIPC will make the PC platform the centre of entertainment, communications and productivity in both home and office, providing the ease of use and convenience of a consumer appliance.

Mr Gates described and demonstrated key technologies and prototypes for SIPC to more than 3,000 PC hardware engineers and executives in San Jose, California at the Windows Hardware Engineering Conference 96 (WinHEC 96).

The demonstrations included enhanced audio, processed and driven from the PC through a consumer stereo system; high-performance 3-D graphics; connectivity between the PC and consumer electronics devices; playback of "digitally perfect" audio and video; and "sealed-case concept PCs" that never need to be opened for users to connect and add new devices.

Leading hardware companies - including Compaq Computer, Hewlett Packard, Intel and Toshiba America Information Systems - were quick to endorse the SIPC framework and its associated technologies. Mr Gates invited the PC hardware industry to join Microsoft and begin making SIPC a reality immediately.

"While the PC is easier to use today, we should not be satisfied," Mr Gates said.

"SIPC technologies will make the PC as easy and convenient to use as other home appliances. PCs will not only be more interactive and fun, they'll also be easier to connect to consumer devices such as VCRs, stereos and TVs. As the PC becomes a central device for entertainment and communications, it will be placed with these consumer devices in the family room."

The SIPC design includes

"You're not going to go to your PC to look up a new fact or find out about movies if you're sitting there watching that memory test program run. I don't think there's anything quite as antiquated as that memory test that comes up or those kind of ugly BIOS (basic input/output system) messages that we all see. Those have just got to go away," said Mr Gates. "Those are an artifact of sort of our nerdy past, you might say, and definitely there's no problem hiding those things. The basic idea of On Now is that you don't have to turn the machine on. But in order to make that work you have to have most components in the machine turned off, and just a little bit of logic there monitoring for events that might come in."

"Those events include the user coming and using the mouse or the keyboard, but they can also include a phone call coming in, where you want to immediately detect what kind of call it is and have the right type of software be activated."

Mr Gates says that this is a great example where the hardware world and software world have to work together. "We have to be able to detect when we can shut down various system elements, and we have to be able to cycle those back on, and cycle them back on very quickly. We don't want any delay when you sit down and want to start using the machine."

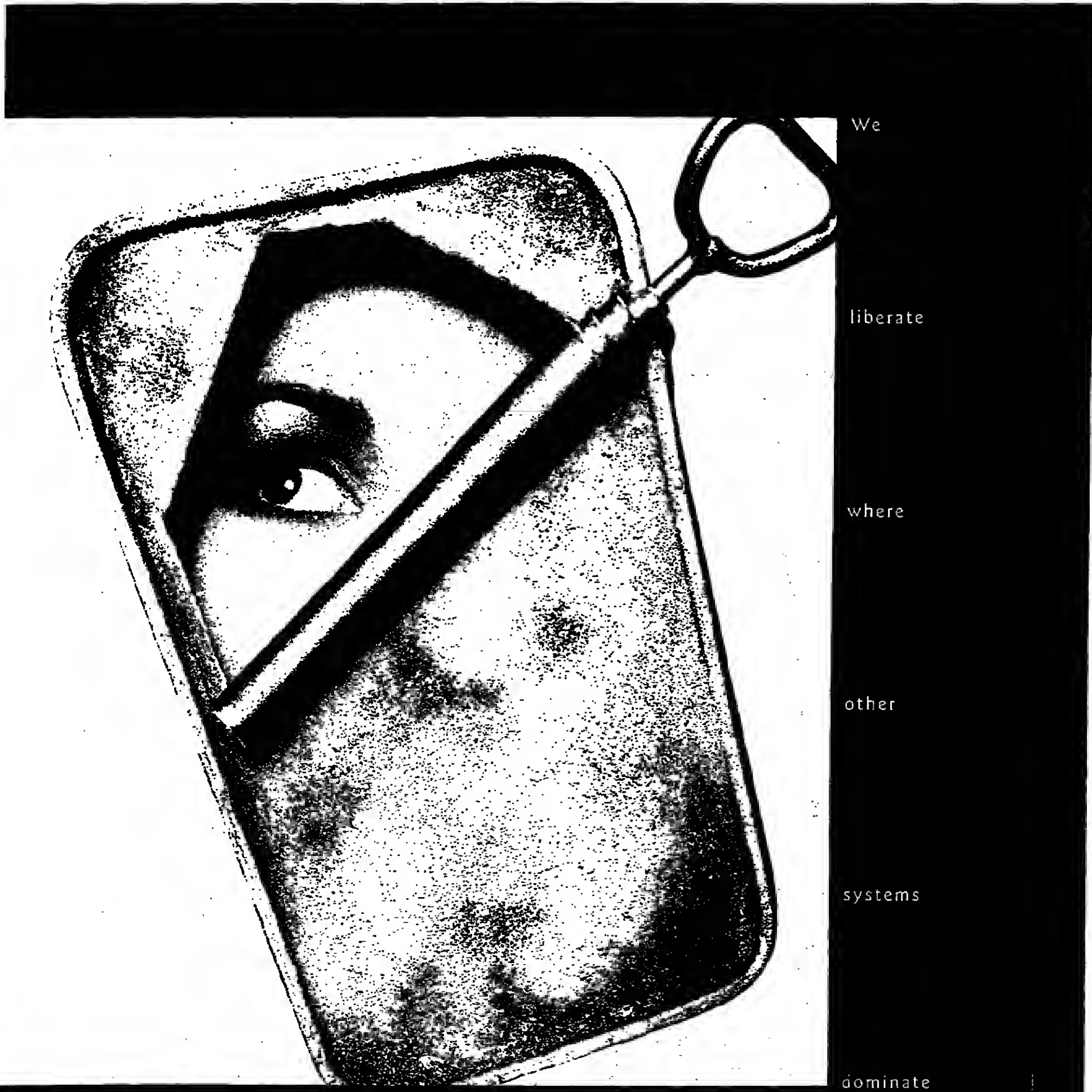
"And so the On Now work is actually an initiative called ACPI - Advanced Configuration Power Interface - that we have a lot of key partners, including Intel and Toshiba, who are helping us drive that forward."

Mr Gates suggests that a consumer with no experience using a personal computer will be able to sit down at an SIPC system and immediately complete tasks such as playing a game, watching a or television programme, browsing the World Wide Web, connecting to a stereo or VCR, listening to voice mail or writing e-mail.

He further claims that extending or connecting SIPC systems to other devices will be as easy as plugging in an extension cord. SIPC technologies include support for new ways to connect to consumer electronics devices and PC peripherals.

He also says that while today's PC users may dread opening the PC case, SIPC systems will not need to be opened. It will be possible for connections to be made while the SIPC system is turned on, with no need to restart the computer.

Finally, Mr Gates pledged that SIPC systems will provide fast access to the Internet and will support critical-mass high-speed data pipelines, such as ISDN and cable modems, to the home. He says SIPC systems will support state-of-the-art Web browsing, with enhancements to Microsoft's Internet Explorer World Wide Web Browser, and provide full support for e-mail, voice messaging, conferencing and faxing.



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Software at work

CASE STUDY IBM's Voice Type Dictation system

Talking with the Woolwich

The Woolwich Building Society has found that as long as you pay attention to training and support, voice recognition can bring productivity benefits to busy professional staff.

"Our group resources director saw a demonstration of IBM's Voice Type Dictation system," recalls Mr Alex Brown, a management consultant with the Woolwich in London.

"He thought it was worth investigating because we have a number of people who produce large quantities of text, but who do not have strong keyboard skills. There was also an obvious saving for business professionals who dictate to their secretaries."

The Woolwich carried out an evaluation of the product which suggested that IBM had a clear lead in this product sector. It bought six copies for an initial evaluation for use to the Legal, Group Audit and Facilities Management departments.

"We struggled initially

because we failed to grasp the training need which the product requires," admits Mr Brown, "so we arranged for IBM to give users some more training. We are used to being very effective with modern software in a matter of hours, but the dictation system is fundamentally different in that it is a product which learns about you in a way other software does not. Depending on your training and how you treat it, you will get better or worse."

The trial lasted about four months and the benefits in saving secretarial time through transcription were clearly defined. Mr Brown also identified other benefits in productivity.

The Woolwich then invited staff to see the system demonstrated and they were offered the opportunity to use the system for a fixed fee, chargeable to their budget. This fee covered hardware, software, training and support. They wanted 20 users, but 30 applied.

These users had the system installed, enrolled to teach the software their voice model and were given initial training. This was followed by further training after two weeks. The users were issued with standard voice macros, which gave them a series of short cuts, such as transferring text into the e-mail system, inserting standard paragraphs and spelling out frequently-used names in full.

Some users ran into hazy periods and fell behind in their use of the system. "You must plan the introduction into a period when users have the time to devote to it, if you are to achieve the 97 per cent accuracy which is possible," advises Mr Brown. "The system won't be effective if it is only used occasionally."

Woolwich staff found that they needed to pay attention to hand-holding, as well as training, and especially in making sure that errors are corrected properly, so the software can learn to understand the user's speech pattern.



Alex Brown: "There was an obvious saving for business professionals"

CASE STUDY Voice recognition in supermarkets

Focus on shrinkage

The Produce Marketing Association of America prints a handy publication that lists the price codes of some 250 vegetable items. It may not matter to a shopper that artichokes are coded 4516 if small, 4084 if large, but supermarket staff at the till need to use these codes to obtain the right price.

Because many of the till operators work part-time or are only employed for a few weeks, there is no question of them memorising every code. Stores issue books of the codes, but consulting these wastes time and creates queues, so check-out staff often guess some of the prices, entering an amount low enough not to antagonise customers and costing the store money. These sums are known as shrinkage, and it is estimated that in a large group on an amount equal to the annual profit from one site is lost every year.

recognition requirement. The next step, one that Balls Foodstores has yet to commit itself to, is Hite's Advanced Produce Point of Sale, or Apropos. This dispenses with the wired link between microphone and PC.

Mr Miller thinks that infrared communication, similar to a TV remote control, is the most likely path for Apropos. Staff can speak conversationally, recording the items in terms such as "a five pound bag of large onions" and the point of sale (PoS) system will automatically translate their words into a price code. A synthetic voice repeats their words via the earpiece, thus allowing any error to be identified.



Michael Miller: "The boys don't want to wear a headset"

A colleague took two minutes to check the items through the sample PoS

Mr Miller says improved speech recognition algorithms and contemporary PC power are his means of delivering accurate voice recognition. Today a PoS system is basically a low-end PC with a cash till.

Such is the extent of shrinkage caused by faulty produce codes that supermarket groups have indicated to Hite they will pay \$1,000-\$1,500 extra for every PoS in order to introduce Apropos.

"We can deliver it well within those constraints," says Mr Miller. He relates a personal experience that convinced him voice recognition has a future at the

check-out. Last year he had sent his collection of plastic fruit ahead to an IT industry event in Houston only to find a supermarket chain pitching up to Atlanta demanding an impromptu Apropos demonstration.

Mr Miller stopped at his local supermarket and filled a trolley with 20 kinds of vegetable. "My cashier had only been working for 10 weeks. He identified 18 items and knew 15 produce codes."

The cashier consulted produce guides and other staff - which meant that Mr Miller spent a total of 14 minutes paying for the goods, while an increasingly irritated queue gathered behind him. Back at Hite, an NCR colleague took two minutes to check the items through their sample PoS using Apropos.

Apropos is not a production system as yet, but the very fact that supermarket chains are unable to calculate the precise wastage caused by the produce code system could guarantee a very rapid roll-out across US suburbs.

And countless staff starting their working lives in supermarkets will not have to endure the ritual of memorising artichoke codes.

Michael Dempsey

APPLICATION Xerox tackles translation

R&D begins to bear fruit

Language translation has long been seen as a challenge to information technologists. Accurate, readable translation is hard enough for an expert and automation of the process has proved to be a particularly hard problem to solve.

Linguistics researchers at Xerox's research laboratories in Europe and the US have been working on the problem for some years and the first fruits of their research are starting to emerge as practical and usable products.

Translation Aid Network Services (Tans) builds on earlier Xerox research to provide a general-purpose translation "server" in a

client-server computing environment. Accessible from a standard Windows PC or through the Internet, it could be an important step towards widely-available language translation services.

Xerox's approach is to concentrate on practical mechanisms for getting at the information held in text - regardless of the language.

The Multilingual Theory and Technology (MLTT) group at Xerox's Grenoble laboratory is researching the structure of natural language and the way it is used.

The group is building a language model with a flexible



The MLTT group at Xerox's Grenoble laboratory is researching the structure of language and the way it is used

rule base to cope with the complexity of language evolution.

Its model of language accepts that words and their usage change according to their context.

The model is the starting point for a range of practical projects. The Tans project is one of the most recent and follows on from Locolex, an earlier project from Xerox which created a translation aid for a desktop computer.

Locolex uses an advanced technique originating at the Xerox Palo Alto Research Center (PARC) in California. The technique is called Finite State Calculus, and Xerox says it speeds up text analysis and translation.

In addition to analysing individual words, Locolex examines their context. More accurate - and logical - translation is, therefore, possible.

Tans takes the translation process away from the desktop; the Tans software runs to a dedicated server computer attached to a network.

Translation becomes another service on the network - such as printing or file storage.

The Xerox team at Grenoble has built two workstation front-end packages to give "client" access to the Tans features.

One uses the Windows PC environment and a specially-enhanced version of Microsoft Word word processor. The translation feature is an extra function on the MS-Word menu.

The user can select a word in a document and request a translation.

Tans can also work from a standard World Wide Web (WWW) browser such as Hot Java or Netscape which could be running on a PC or a Sun Microsystems workstation.

Sun users can also work through a special interface to access a "professional" service on Tans which gives detailed grammatical analysis of sentences.

The first Tans systems were installed at the Grenoble laboratory in September 1995 and the preliminary version includes a French to English

dictionary with 40,000 entries, 1,000 idioms and 5,000 "multi-word" expressions.

Researchers are working on extending the system to include other languages.

Several Xerox companies have expressed interest in using Tans to help in the translation of maintenance manuals.

The system has also been proposed for similar use by a large international vehicle manufacturer.

In the long term, the aim is build on Tans to provide a general-purpose translation service which can be made widely available to any computer user faced with multiple languages in their workplace.

Language translation will always be difficult and will always need some human intervention.

The Xerox Tans project, however, points the way forward and promises solutions to many current problems.

Philip Manchester

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CASE STUDY Voice-operated dictation

Software catches up

When Mr Michael Pettman, a managing partner of commercial law firm Pettman Smith, first tried to find a system which allowed him to dictate correspondence into a computer terminal, he was told he was at least three years ahead of any commercially viable voice-operated software.

Just a year later, in 1991, Pettman and Mr Chris Williams, his IT supplier, client and friend, of Advanced System Architecture, were so impressed with VoiceWriter, from US company DragonDictate, that they agreed to distribute it in the UK.

"Our secretaries were typing a legal document, having it amended, re-typing it, having it amended, and so on," Mr Pettman explains.

"VoiceWriter allowed one of our eight partners or 12 fee-earners to change the text as he or she dictated it. We didn't have to wait for something we'd spoken into a machine but never actually saw, to be typed and returned to us for approval.

"VoiceWriter did - and does - save us a tremendous amount of alteration time, since we can see what we write instantly; it gives us total and immediate control over our own work."

The system also frees secretaries to take on other, more important tasks. "This not only gives them greater job satisfaction, but utilises their talents in a more productive way," says Mr

Pettman. Last year, VoiceWriter was sold to Canadian company Kolvox Communications. Mr Pettman is now distributing Kolvox's product, based on the Kurzweil Computer Products voice operating system.

The Kolvox system is very similar to VoiceWriter, and looks more or less the same on screen. Both have dictionaries of more than 200,000 words, but 50,000 of these are active at any one time in Kolvox's system, compared to 30,000 in VoiceWriter.

Mr Pettman believes that speech recognition is slightly more reliable in the Kolvox product, too, although corrections are easy to make in either. When the user says "oops", the system goes back to the incorrect word and supplies a menu of similar sounding words to choose from. If the correct word is not listed, the user types it in.

Each system enables the user to add as many special words - that is industry specific terms - as they wish, and to incorporate phrases as single words by running words together to create one sound.

For example, Mr Pettman can say: "inconnectionwith" as one word; the system will print: "in connection with".

In addition, Mr Pettman can create a voice macro by saying one thing to obtain something totally different. This enables standard paragraphs to be stored, which are recalled by just a word or phrase.

If, for example, Mr Pettman

wants to include the memorandum and articles of association paragraph, he just says "MS", the system provides two carriage returns, prints "yours sincerely", provides three carriage returns, and prints "M Pettman".

VoiceWriter enabled Pettman Smith to reduce secretarial support from one for every fee-earner to one for every two fee-earners.

At its peak use, about 10 people had VoiceWriter on their desks.

Due to a large turnover of staff and the change from VoiceWriter to Kolvox, however, only three or four are using VoiceWriter at present; Mr Pettman himself has Kolvox on his machine.

But once Pettman Smith has finished installing the Windows operating system throughout the practice, new staff will be trained to speak to Kolvox, instead of a dictaphone. "We still have in speak very slowly into the machine," Mr Pettman admits, "as if cannot recognise normal speed speech patterns."

"But the advantages of the system are tremendous. The editorial control it gives us improves efficiency, and document turnaround time has speeded up tremendously. It will even print envelopes when we tell it to."

But no one yet has invented a machine to seal it, stamp it, and put it in the post.

Marcia MacLeod

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James Essinger
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3 Kai Computer Services Ltd. OCTOPUS ACTIVITY AND CONTACT MANAGEMENT. Improve office productivity and communication, monitor activities and progress.

4 J D Edwards (UK) Ltd. J O Edwards & Company is the industry leader in supplying application software and solutions for the IBM AS/400 market.

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6 Essential Computing Limited. Take advantage of business on the Internet without risking security. Essential solutions include: BLACK HOLE - an application level firewall that protects your network without restricting valid access into and out of your company for E-mail, Web etc.

7 KTP Applied Bar Code Technology. Bar coding can make every business more efficient. KTP supplies Bar Code technology including printers, labels, scanners, portable terminals, connectivity tools, software and quality control equipment.

8 Perception Systems Int'l Ltd. WYWWYWG - What You Want is What You Get. Perception Systems design and install computer systems to meet your company's requirements.

9 Aspect Telecommunications Ltd. Leading UK provider of call centre systems based around the Aspect Call Centre, a fully featured, digital, ACD. Aspect offers either directly, or through partnerships with specialist call centre software suppliers, solutions offering eg. inbound/outbound call processing, IVR, CTI and management information.

10 Co-Cam Computer Services. Specialists in design, development and implementation of call centre technology. A pioneer in CTI and application software, Co-Cam offers bespoke and packaged CTI products linking to all leading switches, and is the UK distributor of BROOK, the renowned sales and marketing application used by over 1,500 companies.

11 CASE Tools Computer Aided Software Engineering

11 Lincoln Software Limited. Lincoln Software produce a range of Meta-CASE and CASE tools for large scale three-tier client/server application development. Our Object IE product is an object oriented, full life cycle tool which includes full C++ Code Generation and Database Generation for Oracle, Sybase and Informatica.

12 Lawson Software. Lawson Software offers robust, client/server applications with proven business benefits for companies worldwide. Lawson has 20 years of experience in developing business applications with high-end, corporate functionality.

13 JBA. Product Description: JBA System 21 is a completely integrated information services infrastructure for organisations trading in national and global markets.

14 3Com. 3Com Corporation has helped over 25 million people gain access to critical information through high speed networks. At the heart of the company's vision is global computer networking.

15 Rhinetext. Rhinetext is one of the industry's leading suppliers of PC-based Computer Telephony components. Analogue and digital Voice Processing and Fax cards, supporting numerous operating systems, are available in configurations of up to 32 ports in a single PC-slot.

16 Computer Systems Integration

16 PACIFIC Systems Int'l. PACIFIC is a computer systems integration company specialising in building and implementing bespoke software solutions across a variety of platforms and industries.

17 Genesys Europe Ltd. Genesys Europe Ltd develops innovative award winning Computer Telephony Integration (CTI) middleware that solve diverse business communication needs. Genesys' cost-effective CTI technologies and management tools improve delivery of services, and reduce operating/labour costs.

21 CTI AND THE INTERNET 1 DAY SEMINAR - 10 JUNE 1996. Seminar Leader: Rob Walters, Author of the FT/UNICOM Report on CTI Plus presentations from CMG, Genesys, Network Connection, CallWare Technologies (USA), IBM.

21-22 CTI/Internet

23 IBSL Service Limited. IBSL Service Limited is a Site Based Computer System for the Construction, Engineering and Contracting industry. In summary, SITEBAND manages daily site costs, collects GRIN's, plant returns and labour timesheets, manages valuations and tracks variations. In addition, SITEBAND links through to most Estimating, Purchasing and Accounting Systems.

27 Search Software America. SSA-NAMES provides high performance name search for person or company names or addresses in all sizes of database. Sophisticated algorithms compute name keys & search strategies which compensate for error & variation found in naming words.

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30 Premenos UK Ltd. Premenos is a global leader in the field of electronic data interchange, providing EDI translation software for the AS/400 and UNIX platforms. Premenos are the first software company to provide secure, reliable EDI transactions across the Internet.

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28 Distribution Manufacturing & Financial Solutions

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31 FilePlus Enterprise. FilePlus Professional 2 is State-of-the-art Document Management Software for the Professional Office environment. This Windows platform software indexes either scanned or DDE Linked files, stores images, searches for, retrieves and prints documents in the fastest, most efficient, secure and convenient way possible.

32 Open Connect (UK) Ltd. EMAIL TO FAX - Single/Multiple Line solution for sending and receiving faxes. Compatible with IBM-Mail, ccMail, HP/OfficeJet, HP/OfficeDirect. Send faxes directly from network clients via analog or direct to fax server from desktop applications. Receive faxes directly to network clients or other destinations. Network client delivery requires use of ISDN facilities.

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33-34 Enterprise Applications

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35 Enterprise-wide Software

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150

Reader survey



FINANCIAL TIMES

Dear Reader

It is important for us to know as much as possible about the readers of FT-IT so that we can continue to improve this product and design others for you as well.

Whether you read FT-IT regularly or only occasionally, we would be grateful if you could help us by completing and returning this questionnaire. The survey results will be used by our editorial, advertising, marketing and electronic media departments. Your reply will be treated in the strictest confidence by Martin Hamblin Research who are a leading independent market research company.

Please return the questionnaire and send it to Martin Hamblin before Monday May 20. The address is on the reverse of the questionnaire. No stamp is required if it is posted in the UK. However, it has not been possible to organise Freepost for outside the UK.

Thank you for your help.

Yours sincerely

Rhys David

RHYS DAVID SURVEYS EDITOR

SECTION I - ABOUT THE FT AND FT-IT

- How often do you read the Financial Times: a) on weekdays b) on Saturdays?

	Weekdays	Saturdays	(11-12)
Every/nearly every issue	<input type="checkbox"/>	<input type="checkbox"/>	1
Quite often	<input type="checkbox"/>	<input type="checkbox"/>	2
Only when FT-IT is published	<input type="checkbox"/>	<input type="checkbox"/>	3
Only occasionally	<input type="checkbox"/>	<input type="checkbox"/>	4
Never normally	<input type="checkbox"/>	<input type="checkbox"/>	5
- And how often do you read FT-IT?

Every/nearly every issue	<input type="checkbox"/>	(13)
Quite often	<input type="checkbox"/>	2
Only when I come across it	<input type="checkbox"/>	3
This is the first issue	<input type="checkbox"/>	4
- Were you previously aware of the publishing programme of FT-IT (first Wednesday of every month apart from January and August)?

Yes, knew precisely	<input type="checkbox"/>	(14)
Knew it was monthly, but not which day	<input type="checkbox"/>	2
Did not know programme	<input type="checkbox"/>	3
- What do you use FT-IT for?

To look for new ideas	<input type="checkbox"/>	1
To understand the marketplace	<input type="checkbox"/>	2
To understand the technology	<input type="checkbox"/>	3
To find out what competitors are doing	<input type="checkbox"/>	4
To provide points for discussion	<input type="checkbox"/>	5
To look for new IT applications	<input type="checkbox"/>	6
To look out for new products	<input type="checkbox"/>	7
To find out about IT companies	<input type="checkbox"/>	8
To read about people in IT	<input type="checkbox"/>	9
To find out about problems associated with IT	<input type="checkbox"/>	0
- What do you do with your copy of FT-IT after you have read it?

Pass it on to colleagues	<input type="checkbox"/>	1
File it for future reference	<input type="checkbox"/>	2
Throw it away	<input type="checkbox"/>	3
- What sort of people do you feel FT-IT is written for?

Non-IT Management who want to know how computers can help them	<input type="checkbox"/>	1	(17-18)
Other executives in companies using IT	<input type="checkbox"/>	2	
IT Management	<input type="checkbox"/>	3	
Management & executives within IT companies	<input type="checkbox"/>	4	
Analysts who track the IT sector	<input type="checkbox"/>	5	
Students of Computer science	<input type="checkbox"/>	6	
- What other sources do you use for information about IT?

Other national newspapers	<input type="checkbox"/>	1
Specialist magazines	<input type="checkbox"/>	2
TV	<input type="checkbox"/>	3
Radio	<input type="checkbox"/>	4
Colleagues/friends	<input type="checkbox"/>	5
Information from IT company literature	<input type="checkbox"/>	6
Information from IT company representatives	<input type="checkbox"/>	7

SECTION II - ABOUT YOU

- Are you...?

Male	<input type="checkbox"/>	1	Female	<input type="checkbox"/>	2	(20)
------	--------------------------	---	--------	--------------------------	---	------
- Are you...?

Under 25	<input type="checkbox"/>	1	45 - 54	<input type="checkbox"/>	4	(21)
25 - 34	<input type="checkbox"/>	2	55 - 64	<input type="checkbox"/>	5	
35 - 44	<input type="checkbox"/>	3	65+	<input type="checkbox"/>	6	

- Are you...?

Working full-time	<input type="checkbox"/>	1
Working part-time	<input type="checkbox"/>	2
Studying	<input type="checkbox"/>	3
Retired	<input type="checkbox"/>	4
Running the home	<input type="checkbox"/>	5
Looking for a job	<input type="checkbox"/>	6

11. What is your country of residence? (23-24)

- Do you use a PC...? (Tick more than one if relevant)

At home	<input type="checkbox"/>	1
At work	<input type="checkbox"/>	2
When travelling	<input type="checkbox"/>	3
Don't use a PC	<input type="checkbox"/>	4

- Is your PC...?

At work	At home	(26-27)
A laptop	<input type="checkbox"/>	1
Desktop stand alone	<input type="checkbox"/>	2
Desktop networked	<input type="checkbox"/>	3
Don't use a PC	<input type="checkbox"/>	4

- Do you have a modem?

At work	At home	(28-29)
Yes	<input type="checkbox"/>	1
No	<input type="checkbox"/>	2

- Is your modem speed...?

At work	At home	(30-31)
Less than 14,400 baud	<input type="checkbox"/>	1
14,400 baud	<input type="checkbox"/>	2
28,800 baud	<input type="checkbox"/>	3
ISDN	<input type="checkbox"/>	4
Don't know	<input type="checkbox"/>	5
Don't have a modem	<input type="checkbox"/>	6

- What PC services do you use?

At work	At home	(32-33)
Corporate e-mail	<input type="checkbox"/>	1
Internet e-mail	<input type="checkbox"/>	2
Internet web access	<input type="checkbox"/>	3
On-line services	<input type="checkbox"/>	4
None of these	<input type="checkbox"/>	5

- Do you use any of the following?

At work	At home	(34-35)
CompuServe	<input type="checkbox"/>	1
America On-Line/Europe On-Line	<input type="checkbox"/>	2
Microsoft Network	<input type="checkbox"/>	3
FT Profile	<input type="checkbox"/>	4
Knight Ridder	<input type="checkbox"/>	5

- If you use the web, how many different sites do you visit during a typical day?

At work	At home	(36-37)
1-2	<input type="checkbox"/>	1
3-5	<input type="checkbox"/>	2
6-10	<input type="checkbox"/>	3
Over 10	<input type="checkbox"/>	4
Difficult to say	<input type="checkbox"/>	5
Don't use web	<input type="checkbox"/>	6

19. Which sites do you visit most frequently? (38-42)

- If you use the web, which Browser do you use?

Netscape	<input type="checkbox"/>	1	Explorer	<input type="checkbox"/>	4
Netscape 2	<input type="checkbox"/>	2	Other	<input type="checkbox"/>	5
Mosaic	<input type="checkbox"/>	3	Don't use web	<input type="checkbox"/>	6

- What type of information do you look for on the web?

News	<input type="checkbox"/>	1
Job advertising	<input type="checkbox"/>	2
Information on products/services	<input type="checkbox"/>	3
Other	<input type="checkbox"/>	4

- How often do you access the web at the following times of day?

Usually	Sometimes	Never	(43-50)
Start of the day	<input type="checkbox"/>	<input type="checkbox"/>	1
During the morning	<input type="checkbox"/>	<input type="checkbox"/>	2
At lunch-time	<input type="checkbox"/>	<input type="checkbox"/>	3
During the afternoon	<input type="checkbox"/>	<input type="checkbox"/>	4
End of the working day	<input type="checkbox"/>	<input type="checkbox"/>	5
During the evening/night	<input type="checkbox"/>	<input type="checkbox"/>	6

- Would you be prepared to purchase goods on-line by credit card?

Yes	<input type="checkbox"/>	1	(51)
Possibly	<input type="checkbox"/>	2	
Definitely not	<input type="checkbox"/>	3	

- Does your company have a web site?

Yes	<input type="checkbox"/>	1	(52)
No	<input type="checkbox"/>	2	

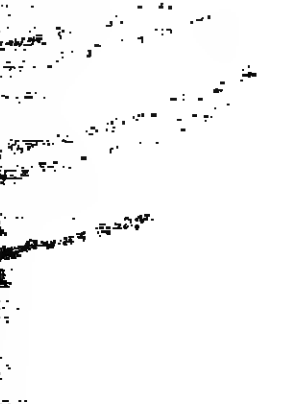
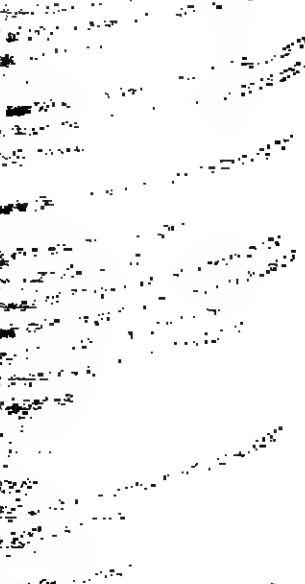
25. Does your job responsibility involve taking decisions about the purchase, leasing or use of goods or services? Please tick any items on the list below for which you:

	(a)	(b)	(c)	(53-55)
	Initiate	Evaluate	Authorise	
Networks and Data Communications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
Personal Computers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
Software/Software Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3
Telecommunications products and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4

Martin Hamblin Research
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London
SW1P 3HL

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<p>36 European Accounting & Business Systems</p> <p>37 Finance Management</p> <p>38 Headsets</p> <p>39 IBM Connectivity Software</p> <p>40 Insurance Software Systems</p>	<p>36 International Business Systems 1 Imperial Place, Epsom Way Borehamwood, Herts WD6 1JN Tel: 0181 2076655 Fax: 0181 2076770</p> <p>Company Description IBS is a wholly owned subsidiary of IBS AB, a Swedish public company and one of the leading software suppliers with over 2000 customers worldwide. The ASW Portfolio is a full range of application software with a GUI interface providing innovative solutions to today's business needs; including Pan European requirements and EuroVAT acting in a true Multi-currency environment.</p> <p>Hardware AS/400 Client Server, Windows and OS/2 GUI support.</p> <p>Coverage 65 Offices in over 30 countries worldwide.</p> <p>Applications Financials, Distribution, Inventory, Asset, Service, Production, Manufacturing, Project, Warehouse Management, EIS and FMOG.</p>	<p>37 Software 2000 UK Crosby House, Meadowbank, Furlong Road, Bourne End, Bucks SL8 5AJ Tel: 01628 850850 Fax: 01628 850243</p> <p>Company Description Software 2000 offers a comprehensive suite of financial and human resources software designed exclusively for the IBM AS/400 server and related technologies, using client/server and object oriented technologies to provide easy-to-use icon and graphical screens and integration with popular windows spreadsheets and word processing packages and taking into account all the requirements of the multinational corporation. Software 2000 has over 1200 clients worldwide.</p> <p>Hardware IBM AS/400, Server, Client/Server - OS/2, Windows, MAC.</p> <p>Geographical Coverage UK, Mainland Europe, USA, Australia, Asia, Sth Africa.</p> <p>Applications Totally integrated financial management & human resources</p> <p>Cost Entry Level Price £25,000</p>	<p>38 Plantronics Ltd Inverclyde Business Park, Strimol Lane Weston Bonwail, Wiltshire SN4 8DD Tel: 01793 842200 Fax: 01793 848853</p> <p>Anyone using a computer and telephone simultaneously can boost productivity and reduce muscle tension with an ergonomic headset. Plantronics offers the world's most advanced headset range. Research shows that with a Plantronics headset users can: "make up to 16 more calls per day." "improve data entry speeds by up to 43%."</p> <p>Compatibility: All major ACD and telephone systems</p> <p>Applications: Anyone spending three hours or more a day on the telephone whilst multi-tasking.</p> <p>Coverage: Over 4 million headsets in daily use worldwide.</p>	<p>39 Netsol International Limited Coach House, Clonsilla, Hitchin Street, Baldock SG7 6AE Tel: 01462 450094 Fax: 01462 450919</p> <p>Company Description Netsol designs, develops and distributes a range of software products that provide easy, reliable and cost-effective client/server software solutions, linking PCs and PC networks to IBM mainframe and AS/400 computer systems. Netsol are available for Windows, Windows for Workgroups, Windows NT, Windows 95 and IBM's OS/2 and Warp operating systems.</p> <p>Geographical Coverage International.</p> <p>Applications IBM mainframe and AS/400 connectivity.</p>	<p>40 EPG Insurance Systems 120 Leman Street, London E1 8EU Tel: +44(0)171 488 4080 Fax: +44(0)171 488 1181 Email: sales@epg.co.uk</p> <p>EPG specialises in providing insurance software systems and services to the international insurance industry. The company has achieved leadership position in the London market with many brokers, insurance and reinsurance companies and Lloyd's syndicates adopting EPG systems. In recent years, it has also expanded its international presence with a general insurance system. Within the group is a solutions division which specialises in bespoke PC applications for all market sectors. EPG's services encompass: Consultancy, disaster recovery, facilities management, bureau services and technical support.</p> <p>Hardware/Compatibility: IBM AS/400-ORACLE-SYBASE Microsoft and Lotus Business partner</p> <p>Geographical coverage: Worldwide. Main offices: London-New York-Hong Kong.</p>
<p>41 Integrated Business & Application Software</p> <p>42 Multi Media Software</p> <p>43 Network Connectivity</p> <p>44 Network Troubleshooters</p> <p>45 Outsourcing</p>	<p>41 Touchbase International Ltd Misses House, 1-3 Valley Drive London NW9 5NG Tel: 0181 2968208 Fax: 0181 2661244 E-Mail: 100555.3975@compuserve.com</p> <p>If you're looking at JBA, JDE, Chorus, Software 2000 or Code, then tick our box too.*</p> <p>i-CUBED Fully Integrated Financial & Logistics Applications</p> <p>For further information contact: Tim Livingston *All trademarks acknowledged</p>	<p>42 First Information Group/Flag Tower™ Knightsbridge House, 197 Knightsbridge, London SW7 1RB Tel: 0171 393 3000</p> <p>Company Description Bespoke multimedia business to business solutions. The Consumer Division, Flag Tower™, publishes highly acclaimed interactive documentaries combining stunning graphics, text and animation with a unique audio visual narrative. Releases include The Space Race, World War I, World War II, War in the Pacific, Great Generals of the 20th Century and A History of Medicine.</p> <p>Hardware/Compatibility Multimedia IBM PC and compatibles</p> <p>Geographical Coverage World-wide</p> <p>Cost Single disk: £29.99 Double disk: £39.99</p>	<p>43 Thomas & Betts Ltd Foster Ave, Woodside Park, Dunstable, LU5 5TA Tel: 44 (0) 1582 677080 Fax: 44 (0) 1582 608816</p> <p>In today's fast moving networking environment with ever increasing data speeds and new EMC legislation, your structured wiring system must meet the exacting demands placed upon it. Thomas & Betts' comprehensive range of connectivity products is designed to meet with your needs of today and those of the unforeseeable future.</p> <p>All you need to know about structured wiring is in our new catalogue. For your free copy, please call us now, or see us on Stand No. V17 at Networks '96.</p> <p>Geographical coverage: Worldwide</p>	<p>44 Fluke (UK) Ltd Colonial Way, Watford Herts, WD2 4TT Tel: 01823 240 511 Fax: 01823 225 067</p> <p>Fluke 68X Enterprise LANmeter, Ethernet & Token Ring Enterprise LANmeters are handheld battery powered network troubleshooters. Utilising SNMP and RMON capabilities the 68X Series provides local and remote network visibility in one package, that traditionally required multiple tools; information is easier to understand for efficient problem resolution.</p> <p>Hardware/Compatibility: Token Ring STP (IBM Type 1) UTP (IBM Type 2)</p> <p>Ethernet - Coax & UTP</p> <p>Geographical Coverage: UK, CI and Eire</p> <p>Applications: TCP/IP, Novell, Netbios & Banyan Vines</p>	<p>45 CSI (Computing Services for Industry) Canal Place Leeds LS12 2DU Tel: 0345 010105 Fax: 0113 243 6950</p> <p>CSI Outsourcing specialise in providing high quality, fully managed systems for companies using IBM midrange equipment for key business applications. Service levels to systems users are guaranteed. Services can be based on customer's site or at a CSI location and provided 24 hrs 365 days a year.</p> <p>Hardware/Compatibility: AS/400 Ops, Applications, Tech support, LANs, WANs, Desk-top</p> <p>Geographical Coverage Service from Datacentre in Nottingham and eight other UK locations</p>
<p>46 Rack Mount Computer Platforms</p> <p>47 Software Development</p> <p>48 Software Development & Maintenance</p> <p>49-50 Speech Recognition</p>	<p>46 MAP Micro Limited Unit 9, Palmers Road Industrial Estate Emsworth, Hampshire PO10 7DH UK Tel: 01243 373757 Fax: 01243 378886 Email: sales@map.co.uk</p> <p>Rack mount industrial computer systems with up to 20 full length PC/ISA slots, 12 hard drives, 486DX to Pentium PRO processors, hot swap AC or DC power supplies. Designed and manufactured in the UK in accordance with ISO9000 certified procedures. MAP Micro Ltd. are one of the largest suppliers of Industrial PC equipment in the UK.</p> <p>Hardware/Compatibility Fully PC compatible ISA and PCI</p> <p>Geographical Coverage Europe (UK Group headquarters)</p> <p>Applications: PC based telephony & CTI applications</p> <p>Cost Very competitively priced</p>	<p>47 RCMS Computing Services Horton Manor, Stanwell Road Horton, Berkshire SL3 9PA Tel: 01753 681077 Fax: 01753 685556</p> <p>RCMS supplies IT services specifically designed to provide a competitive business advantage for its corporate customers. RCMS specialises in the design and development of distributed Client/Server systems. This covers operational business systems, information delivery, data-warehousing and integration with the Internet. Additional Technical Services include specialist support and Application Management. RCMS has been providing IT solutions to its customers for 10 years. Other members of RCMS Group include: NEI who provide bespoke Document Management and Workflow systems; and RCMS Interact whose expertise is in IT Training.</p> <p>Geographical coverage: UK</p> <p>Applications: Various</p> <p>Cost: On application</p>	<p>48 BAeHAL Software Ltd Farnborough Aerospace Centre PO Box 87, Farnborough, Hants GU14 6YU Tel: 01252 382020 Fax: 01252 382380</p> <p>Company Description Superior communications unite the proven software skills of the Indian sub-continent with the project management expertise of British Aerospace to enable BAeHAL, an ISO 9001 software services provider, to deliver high quality, cost effective solutions to British industry.</p> <p>Hardware Client Server, Mainframe and PCs.</p> <p>Geographical Coverage Europe, US and Pacific Rim.</p> <p>Cost Up to 50% less than UK rates.</p>	<p>49 Kolvox Kolvox VoiceWriter Ltd 79 Knightsbridge, London SW1X 7RB Information Hotline: 0181 533 6666</p> <p>Company Description Now you can dictate letters and reports straight into your PC in as much time as it takes to say the words! Kolvox flagship products, OfficeTALK® and LawTALK®, allow you to control your PC entirely by voice, carrying out commonly used commands and creating accurate text from spoken words without lifting a finger. To streamline your office efficiency, maximise productivity and reduce costs, talk to us today.</p> <p>Hardware: Minimum 486DX/33, 16Mb RAM, 30 Mb free hard disk space.</p> <p>Applications: Anyone in the business or legal market who would prefer to talk to their PC than use a keyboard or mouse.</p> <p>Cost: From as little as £645 + VAT.</p>	<p>50 Responsive Systems Limited 34 Galsbury Road, London W14 8AS Tel: 0171 602 4107 Fax: 0171 603 2109 Email: talk@resnet.co.uk WEB: http://www.talk-systems.com</p> <p>Talk business to your PC with Kurzwel VOICE for Windows. A speech recognition program which lives up to the hype, enabling dictation at 60+ words per minute into any Windows™ application, as well as hands-free control of the PC through a set of naturalistic voice commands. A well constructed package, that actually does what it claims! PC PRO Magazine</p> <p>Hardware/Compatibility: PCs with Soundblaster and 16MB RAM</p> <p>Geographical Coverage: UK and Europe</p> <p>Applications: Windows 3.1 or 95</p> <p>Cost: £595 for Kurzwel VOICE 2.0 Inc. microphone (exc.VAT). TALK * SYSTEMS</p>
<p>51 Statistical Software</p> <p>52 Storage/CD-ROM & CD</p> <p>53 System Management</p> <p>54 Telecommunications</p> <p>55 Training & Consultancy</p>	<p>51 Computer Algebra Centre The Research Park, Vincent Drive Edgbaston, Birmingham B15 2SD Tel: 0121 471 4155 Fax: 0121 471 5189 Email: sales@cac.com.uk</p> <p>The Computer Algebra Centre distributes a range of specialist software packages in the areas of statistics and mathematics and, together with its sister company TELECOM Software, provides scientific and technical software services particularly in the areas of speech recognition and multimedia learning systems.</p> <p>They are the UK distributors of SYSTAT which is already used by thousands of statisticians, engineers, scientists and researchers all over the world. Written by professional statisticians, SYSTAT gives you accurate results that you can trust and arguably no other statistics package can produce such a wide range of scientific and technical graphs.</p> <p>Hardware/Compatibility: SYSTAT is available in versions for Windows, DOS and Macintosh</p>	<p>52 Plasmon Data Limited Welling Way, Melbourn, Herts SG8 6EN Tel: +44 1763 262663 Fax: +44 1763 264444 Email: sales@plasmon.co.uk</p> <p>Plasmon manufactures and supplies a wide range of optical storage solutions including media and software. The range includes CD Recorders, low cost PD 850MB rewritable drives and MO drives with capacities of 2.6Gbytes. The industry's widest range of jukeboxes are available with capacities from 45 to over 870 Cbytes. Software options enable seamless integration of these products into most operating systems requiring additional capacity for storage extensions, HSM, backup, archiving, and CD publication.</p> <p>Hardware/Cost: Prices range from £399 for PD drives, £282 for CD Recorders, and up to £34,000 for top of range jukebox products.</p> <p>Geographical Coverage: Offices worldwide servicing most countries either directly or via strategic partners.</p>	<p>53 Heroix Corporation Ltd Yeomans Court, Ware Road, Hertford SG13 7HL, England Tel: +44 (0) 1992 500006 Fax: 01992 500065</p> <p>Company Description Can you reduce the cost of managing your systems and provide users with better services and increased productivity? Heroix can. This powerful software solution detects and automatically formulates the correct solutions to system problems. Heroix Corporation is a well established company with a proven history in system management services and solutions for VMS, UNIX-DEC, HP, IBM, SUN & Windows NT.</p> <p>Geographical Coverage Worldwide</p> <p>Users Include 16 of the Times Top 30 Companies.</p>	<p>54 CIC Ltd Portland House, London Road, Bagshot, Surrey GU19 5PG Tel: 01276 453 105 Fax: 01276 453 108</p> <p>Automated data capture and signature verification from hand written forms via ICR/OCROMR character recognition. Document processing, imaging, storage and retrieval. High traffic ISDN computer linked fax systems.</p> <p>Hardware/Compatibility: PC/Win/Win 95/NT</p> <p>Geographical Coverage: UK & Europe</p> <p>Applications: Teleform ICR, OPT fax systems, Telesign Signature Validation</p>	<p>55 Peritas Ltd Beaumont, Old Windsor, Windsor, Berkshire SL4 2UP Tel: 01753 868181 Fax: 01753 841775</p> <p>Company Description One of Europe's largest consultancy and training organisations, Peritas provides: information systems training; multimedia consultancy/training; human development consultancy; change management; skills training; training venues; training facilities management.</p> <p>Geographical Coverage World-wide</p> <p>Cost Please ring 01753 851483 for further information</p>
<p>56-57 Telephone Systems Manufacturer</p> <p>58 22 Electronic Commerce</p> <p>59 Voice & Information Processing</p> <p>60 Voice Processing & CTI Solutions</p>	<p>56 SDX Business Systems Limited Sterling Court, 15-21 Mundells Weylyn Garden City, Hertfordshire AL7 1LZ Tel: +44(0)1707 392200 Fax: +44(0)1707 376933 Email: cooke@sdxbsl.com</p> <p>SDX is the UK's largest independent manufacturer of business telephone systems. In 1995 SDX launched the most advanced voice and data switching available to the UK market - INDeX (Integrated Network Digital eXchange) whilst achieving a 25% annual sales growth in the same year. SDX is a leader in the CTI field.</p> <p>Product Descriptions: The INDeX platform supports PBX, KeySystem, ISDN, Networking, ACD, Voice Processing, CTI and System management. Award-winning FT8 Windows-based dialling application and SPOT the PC phone.</p> <p>Hardware and Software Compatibility: INDeX's open architecture supports all major CTI architectures and standards, including Novell's Telephony Services, IBM CallPath, Microsoft InTel TAPI, and our own Synergy program. PC-based Windows Operator Console (WOC) offers traditional PBX configuration with optimal functionality.</p> <p>Geographical Coverage: SDX BSL sells exclusively through a specialist European network of approved resellers and VARs. Export territories include: Europe, Asia and South America.</p> <p>Applications: As above</p> <p>Cost: Flexible configuration allows entry level-cost to suit individual requirements.</p>	<p>57 INDeX The INDeX logo is a stylized 'X' with the text 'INDeX' above it and 'THE ONLY SOURCE FOR BUSINESS' below it.</p>	<p>59 SAA Consultants The Computer Complex Somerset Place, Plymouth PL3 4BB Tel: 01752 508 000 Fax: 01752 608 838</p> <p>SAA is a specialist provider of innovative EDI and EC solutions with over 2,000 corporate clients worldwide. The E73 products use an Intelligent Messaging Systems Architecture facilitating concurrent processing of EDI, E-Mail, Fax and non-EDI data. These solutions offer the flexibility and power to meet real business needs.</p> <p>Hardware/Compatibility: UNIX, AS/400, OS/2, Windows (NT Gateway, 95 & 3.X)</p> <p>Geographical Coverage: UK, Europe, S.Africa, Far East</p> <p>Applications: EDI & EC products - all markets</p> <p>Cost: On application</p>	<p>59 Brito Voice Systems Brannen House, 4 Cambridge Business Pk Milton Road, Cambridge, CB4 4WT Tel: 0161 975 4044 Fax: 0161 975 4001</p> <p>Brito Voice Systems is a world leader in providing voice and information processing solutions. Users include major corporate customers, call centres and network operators. Applications range from interactive voice response and computer telephony integration to a range of network services.</p> <p>In addition to integrated system provision Brito can also offer its customers the use of its fully managed service bureau and its experience in the telephony auditing arena.</p> <p>Geographical Coverage: International - offices worldwide</p> <p>Applications: Voice and information processing</p>	<p>60 eurovoice limited Oapdock House, Old London Rd, Ipswich, IP8 3JW Tel: 01473 730000 Fax: 01473 730001 Web: http://www.eurovoice.co.uk</p> <p>eurovoice is a specialist supplier of voice processing, computer telephony integration and Internet-based solutions. Our new SWAN OmniServer provides flexible voice, fax and internet functionality on a high-performance Windows NT based platform.</p> <p>Hardware/Compatibility: Most databases and host systems, most PBXs & ACSs.</p> <p>Geographical Coverage: eurovoice focuses on Western Europe and Scandinavia.</p> <p>Applications: AVR, CTI, On-line services</p> <p>Costs: Solutions from £10,000</p>
<p>61 Voice Recognition Software & Systems</p> <p>62 Voice Systems</p> <p>63 Voice Systems: Consultancy & Support</p> <p>64 Workflow Automation & Document Image Management</p>	<p>Operetta™</p> <p>The automatic switchboard that callers can speak to</p> <p>Try it! call 01223 846177 and ask for Adrian Burt</p> <p>Vocalis Limited, Ozean House, Mill Court, Great Shelford, Cambridge CB2 8LD. Tel: 01223 846177 Fax: 01223 846178</p>	<p>63 Voicelink Systems Limited The Oaks, 2-4 Paddock Road Gerrards Cross, Bucks SL3 7QE Tel: 01733 891791 Fax: 01733 891792</p> <p>Voice link enable you to set new standards for the way you conduct business over the telephone. Whether your needs call for the most sophisticated predictive dialler system available, teleservicing software or the integration of the entire call centre, Voicelink can help.</p> <p>Geographical Coverage: Voicelink, together with its parent company DSI is a company with worldwide coverage.</p> <p>Voicelink Systems LIMITED</p>	<p>64 Aptech Limited Aptech House, Meadowfield Ponteland, Newcastle upon Tyne, NE20 9SD Tel: 01661 860999; Fax: 01661 822777</p> <p>Aptech specialise in voice recognition and text-to-speech synthesis. Systems are taken from market leaders and supplied off-the-peg or customised to meet client needs. Customers are predominantly blue chip companies, anxious to obtain competitive advantages.</p> <p>Consultancies have been provided to the European Commission, Government Departments and major IT manufacturers and suppliers. The Company is the longest established voice systems specialist in the UK and has over 1500 customer sites.</p> <p>Hardware/Compatibility: All platforms</p> <p>Geographical Coverage: UK and other European community countries</p> <p>Applications: Shop-floor data capture to word processing</p>	<p>65 PLEXUS, A Division of BancTec 16 Cherry Orchard West, Kembrey Park Swindon, Wiltshire SN2 8JY Tel: 01793 614110 Fax: 01793 614287</p> <p>Originator of a complete suite of workflow automation, document image and storage management tools. Utilises C, 4GL and GUI technology to rapidly create bespoke solutions. BancTec regard Plexus tools as strategic, investing heavily to ensure Plexus maintains its market lead.</p> <p>Hardware/Compatibility: UNIX (any platform), Windows/NT, MAC, OS/2</p> <p>Geographical Coverage: Worldwide</p> <p>Applications: DIP, DIM, workflow, storage</p>	

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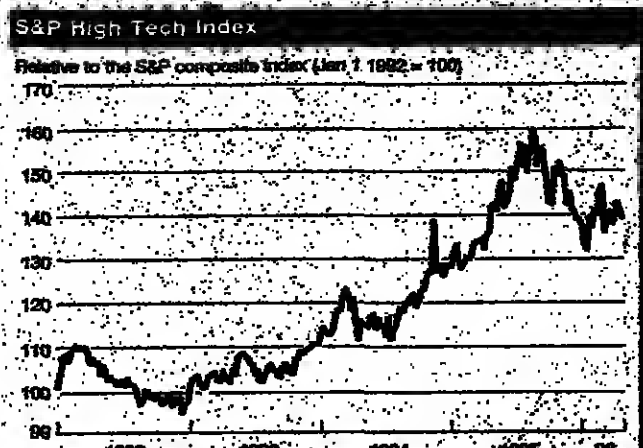
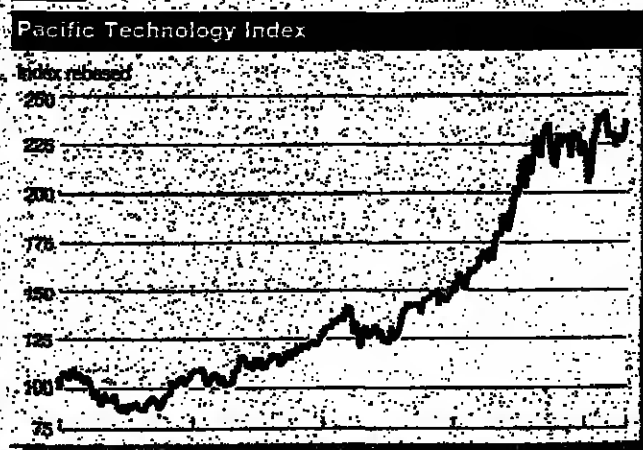
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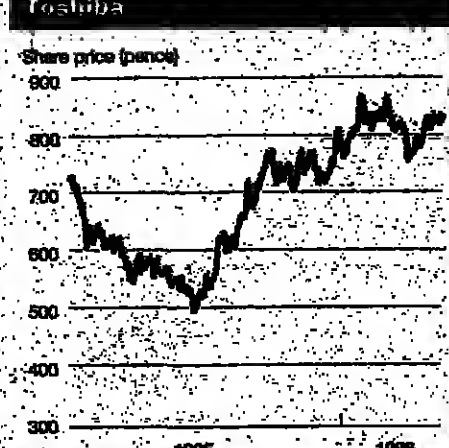
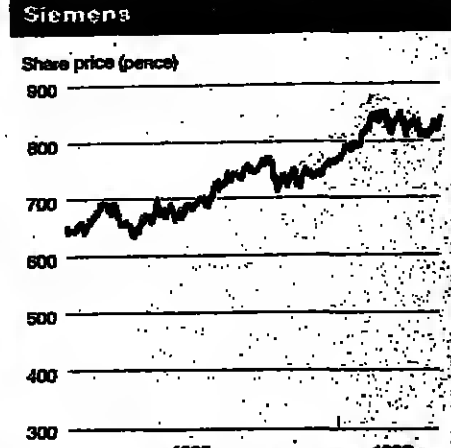
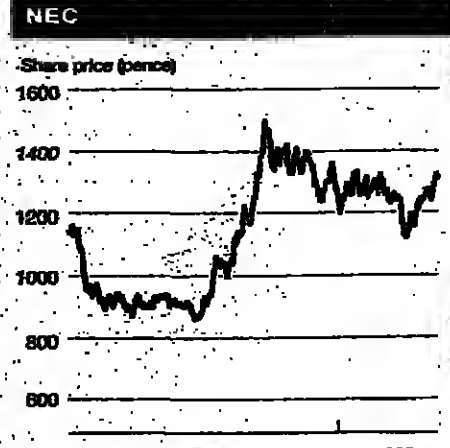
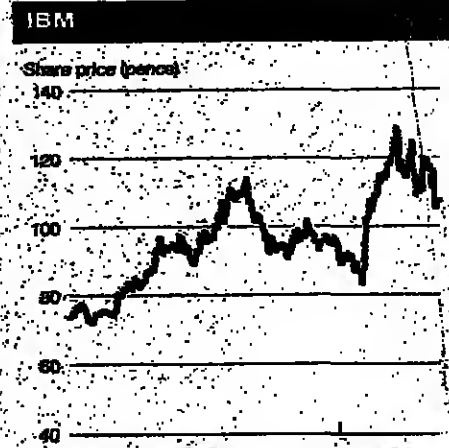
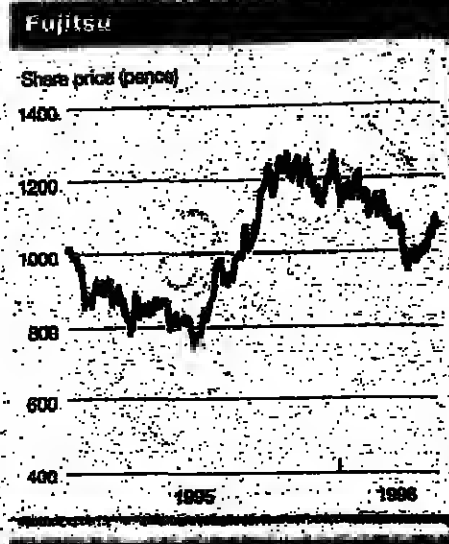
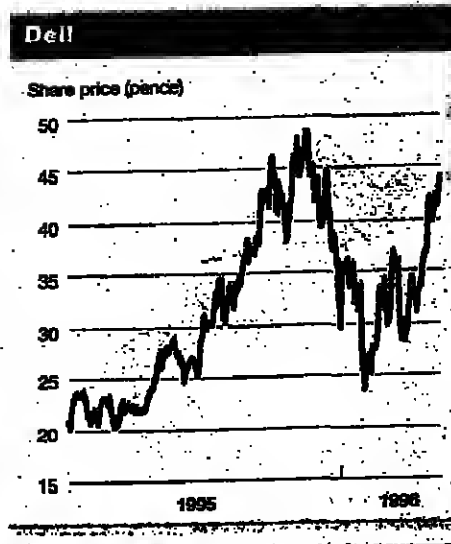
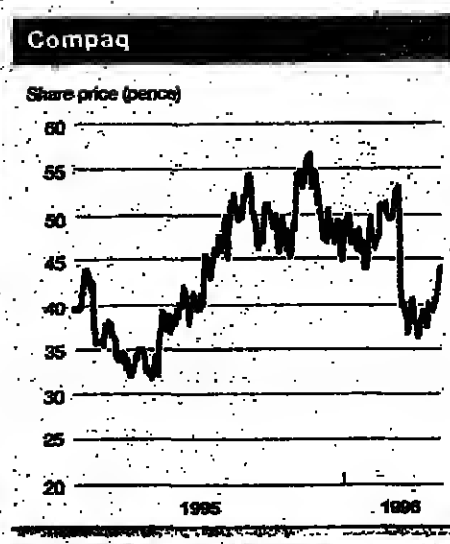
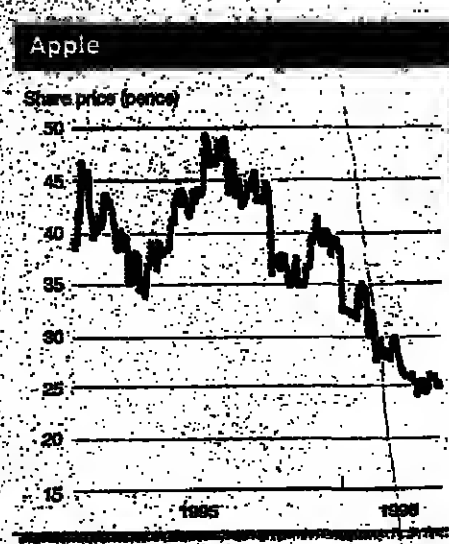
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STOCKWATCH



Source: DataStream/The Pacific Stock Exchange



Stockwatch comment By Paul Taylor

US results set the pace

'Market dynamics for 1996 appear to be strong worldwide' says Compaq chief Eckhard Pfeiffer

Leading information technology shares continued to rebound last month, buoyed in part by generally better than expected first-quarter results from US-based companies including Microsoft, Intel and Compaq and mostly positive comments on the earnings outlook.

Microsoft's shares rose after it announced earnings that suggested the computer industry was healthier than portrayed during the first three months of the year, while Intel's shares jumped 4% to 64¢ a day after reporting first-quarter earnings that exceeded analysts' forecasts.

Like Microsoft, Intel also was modestly upbeat on the outlook for the current quarter, as was Compaq, one of the leading manufacturers of portable PCs, which reported a 42 per cent increase in first-quarter sales to \$4.2bn last week.

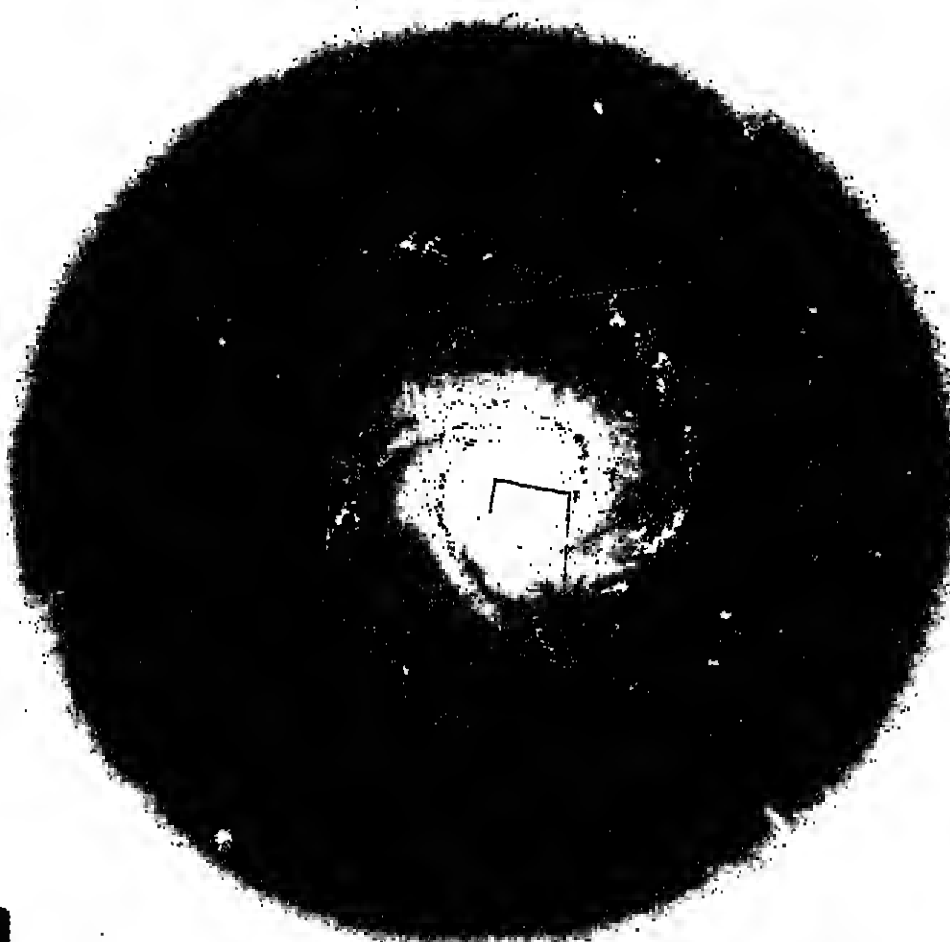
Mr Eckhard Pfeiffer, Compaq's president and chief executive, claimed the company had gained market share "as a result of the decisive steps we took to competitively position our desktop and server products." He added: "The market dynamics for 1996 appear to be strong worldwide."

Shares in Compaq have risen sharply over the past six weeks, as have shares in Dell Computer, another leading portable computer manufacturer. Shares in Toshiba, the portable market leader, also continued to rebound.

However, shares in International Business Machines remained under pressure despite reporting stronger-than-expected first-quarter operating earnings and a long-anticipated increase in its quarterly dividend.

Similarly, Apple Computer's shares also remained under pressure as the group's new chief executive continued to grapple with Apple's problems.

In contrast, Olivetti's troublesome personal computer subsidiary has begun to recover from years of heavy losses.



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Asset allocation: by Philip Coggan

UK funds miss out on US rally

A long-term enthusiasm for the Pacific basin led to a short-term slip-up in the US

There is comfort in crowds. UK pension funds may have been totally wrong about the prospects for the US equity market in 1995, but at least they were all wrong together.

That funds had more assets in the Pacific basin (ex-Japan) in 1995 than in the world's leading economy may seem odd to the casual observer. But it is a logical outcome when an industry uses itself, rather than an outside index, as its benchmark.

If the consensus among pension fund managers is that US equities are overvalued, the median fund will have a small weighting in North America. A fund which matches the weighting of the US in the FT-A World (ex-UK) index would have a portfolio much more skewed to Wall Street than its peers.

In 1995 such a portfolio would have heavily outperformed its rivals. But the chances are the manager would have received few plaudits for such a performance, and would have been criticised heavily had Wall Street declined sharply.

This herd mentality means that the asset allocation of the pension fund industry changes slowly over the years. It may also explain why funds have apparently been slow to respond to the 1995 Pensions Act, which set a minimum funding requirement.

The act was expected to make funds buy more bonds, as trustees strived to match

assets with liabilities. Pension funds are steadily becoming more mature, with a growing obligation to meet the income needs of current beneficiaries by investing in bonds, rather than using equities to provide asset growth to help fund future liabilities.

Although pension funds modestly increased their exposure to bonds in 1995, the proportion of funds invested in conventional gilts was the same - 6.1 per cent, according to the WM Company - as in 1994, when UK government bonds were in a bear market.

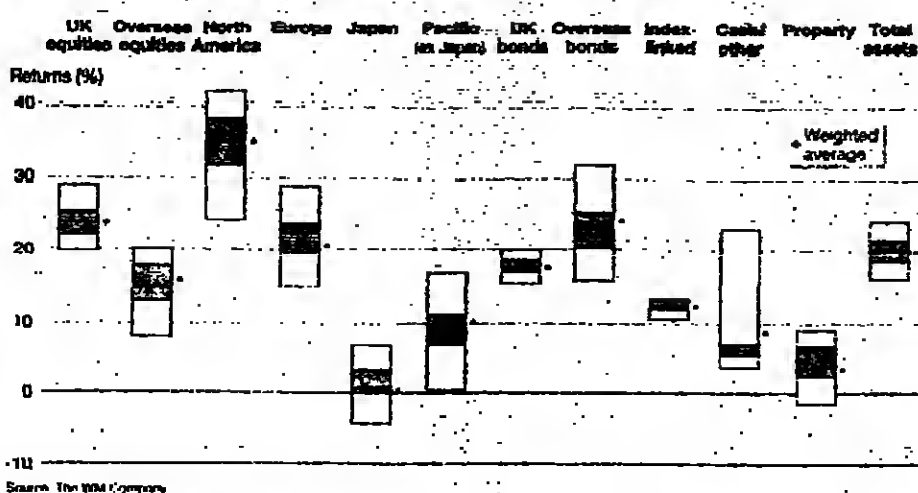
Funds' low weighting in conventional gilts - in 1995, the holding was 16 per cent - might seem surprising since the last decade has been a relatively good one for bonds. Since the start of 1990, conventional gilts have produced a cumulative return of 104.7 per cent, compared with 95.4 per cent from UK equities. And the 1995 Pensions Act, which was published in 1993, so funds were well aware that they might need to make a long term shift towards fixed-interest securities.

However, the provisions of the Act are only being phased in slowly and will not take full effect until the next decade. Funds have no need to rush. Indeed, they received an excess return from UK equities of six percentage points over conventional gilts last year.

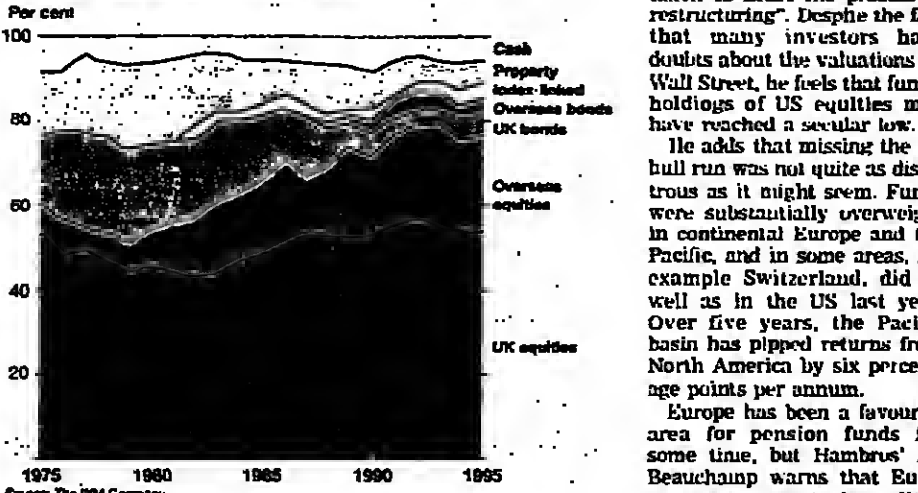
There was a shift into the index-linked sector of the gilt market, however. The proportion of portfolios in index-linked rose from 3.7 per cent in 1994 to 4.3 per cent last year, the highest level for a decade.

Mr Gordon Bagot, research and consultancy director at WM, says that this rise was

Returns and ranges 1995



WM all funds universe: asset mix



due to a limited number of big, mature pension funds moving heavily into the index-linked field, rather than a general shift by all funds.

On the equity side, funds continue to have a heavy weighting in the UK. It is arguable whether this is justified - UK equities have underperformed overseas shares over the last three and five year periods, although they did better in 1995, and over the ten years since 1986. A strong UK weighting is justifiable from the liability-matching point of view and gives exposure to growth in overseas economies through UK companies' substantial export earnings and overseas operations.

The proportion of pension fund portfolios invested in UK shares has edged down from the peak of 57.6 per cent

reached in 1992, but still represents a hefty 53.6 per cent.

Overseas equity holdings have generally edged higher over the past 10 years, although with dips in 1987 and 1990. After peaking at 24 per cent in 1993, they were down to 22.7 per cent in 1995.

There were a number of reasons why managers missed out on the US market, which offered returns of 35 per cent last year. Mr Ian Beauchamp, director and chief economist at Hambro's Fund Management says: "In 1995, nobody believed that the US was going to enjoy a soft landing but interest rates fell and the resulting liquidity was invested in financial assets."

Mr David Berry, director of investment strategy at BZW Investment Management says that "people misread the

extent to which the US had taken to heart the process of restructuring". Despite the fact that many investors have doubts about the valuations on Wall Street, he feels that funds' holdings of US equities may have reached a secular low.

He adds that missing the US bull run was not quite as disastrous as it might seem. Funds were substantially overweight in continental Europe and the Pacific, and in some areas, for example Switzerland, did as well as in the US last year. Over five years, the Pacific basin has piped returns from North America by six percentage points per annum.

Europe has been a favourite area for pension funds for some time, but Hambro's Mr Beauchamp warns that European governments have little scope for further cuts in interest rates and that company earnings will disappoint.

Property has been steadily declining as a proportion of pension fund portfolios, from 11.2 per cent in 1993 to 5.3 per cent last year. That is hardly surprising in the light of the category's poor performance; over the last 10 years.

In the US, some securities firms have been arguing that property is not a successful inflation hedge for institutional investors and that a basket of commodities would be a more suitable substitute. Finally, while there was an increase in cash weightings last year, this should not be taken as 'overweighting' evidence of manager's caution. At 4.5 per cent, cash holdings are still well below the 6-7 per cent recorded at the end of the 1980s.

Gifts: by Richard Lapper

More of the same please

Funds' growing appetite for these bonds does not extend to repo transactions

A combination of economic and regulatory pressures is forcing pension fund managers to step up their gilt investments. Figures from the Central Statistical Office, published in March this year, show the extent of the growth to interest. Pension funds have roughly doubled their holdings of gilts since 1991, with net flows rising from £2.77bn in 1992 to £2.83bn in 1993, £8.4bn in 1994 and £7.2bn in 1995. Flows into the gilt market were negative to the tune of £3.4bn in 1996.

By the end of 1995 pension fund holdings amounted to some £49bn, compared with only £24bn in 1992. During the same period pension funds have reduced their holdings of UK and overseas equities, with net investments dropping by £6.83bn to 1995. During 1994 they recorded a modest rise of £370m.

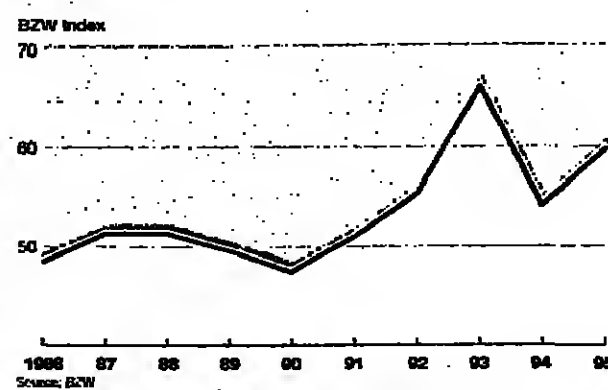
Holdings of overseas equities have also dropped, declining by nearly £5bn in 1994 and rising by a mere £1m last year. There is also some anecdotal evidence that within this general context funds have begun to increase their holdings of index-linked paper in particular.

"We have seen more investment in index-linked paper than in conventional gilts," says Mr Paul Aberley, a director with Lombard Oiler Investment Management Services. "Actuaries are saying that index-linked is the way to go and allocations to index-linked are becoming more common."

The shift is occurring for several reasons. Since the early 1990s inflation has fallen steadily in the UK, reflecting international trends as well as the success of the government's new counter-inflationary strategy, including the adoption of an inflation target and a greater degree of independence for the Bank of England.

This has benefited gilts which have underperformed equities in a much lesser extent. BZW's gilt price index rose by 8.7 per cent in 1992 and 19.3 per cent in 1993. The index fell by 18.1 per cent in 1994 before recovering by 10.3 per cent last year. Meanwhile

Gilt prices



BZW's equity price index rose by 14.8 per cent and 23.1 per cent in 1992 and 1993, fell by 7.9 per cent in 1994 and rose by 18.6 per cent last year.

"If we are moving to an environment where inflation is going to be lower, there will be less to lose by investing in gilts," says Mr Simon Briscoe, chief UK economist at Nikko Securities, the Japanese securities house.

All of these changes are affecting the psychology of both pension fund trustees and their investment managers. Mr Briscoe says that the latter are re-evaluating their overall approach to the market. "If gilts have outperformed equities in a certain quarter, the fund manager knows he will be under pressure from trustees. They are very nervous about missing out on gilt rallies."

Despite their increased exposure to gilts, pension funds are as yet showing little interest in two of the main elements of the gilt market reform introduced over the past year and a half. Repos - introduced for the first time in the UK earlier this year, when restrictions limiting bond borrowing and lending were removed - have been more or less ignored by

pension funds. Although repos should increase the extent to which pension funds can earn extra revenues on their bond portfolios, most of their investment managers make use of traditional stock lending arrangements for this purpose, and have been reluctant to modify systems and develop the documentation necessary to participate in the new market. One problem frequently mentioned by investment managers is the technical difficulty of managing the large quantities of cash generated in repo transactions.

"Repos have been slow to take off," says Mr James Johnston, investment director of UK fixed interest at AMP Asset Management. "Many managers are still using stock lending facilities. Repos can sometimes offer a higher return but there are costs involved in starting to use them."

"It may snowball down the line but it is a slow process," adds the head of gilt sales at one market-making firm. "People are watching and waiting to see the effects."

Strips, zero coupon bonds created when the coupon is stripped from a bond and traded separately, which the government will introduce early next year, will also have relatively few attractions for pension fund managers - at least in the short term. New instruments, such as indexed zero coupon bonds, will allow them to take tactically bullish views more easily.

Investment managers say that they are unlikely to use strips in a strategic fashion on behalf of pension fund clients, and that insurance companies are more likely to use the new instruments for matching assets and liabilities.



The Bank of England has played a key role in combating inflation

Returns and asset mix on the WM All Funds universe, end 1995

	Returns (%)	Asset Mix (%)
UK equities	23.8	54
Overseas equities	15.7	23
North America	35.7	4
Europe	21.7	8
Japan	0.5	4
Pacific (ex-Japan)	10.5	5
Other International	-2.2	7
UK bonds	17.6	6
Overseas bonds	23.7	4
Index-linked	12.1	4
Cash/other investments	4.5	5
Total assets (Ex prop)	20.2	95
Property	3.5	5
Total assets (Inc prop)	19.1	100

Derivatives: by Samer Iskandar

Faith eroded by scandal

The slow expansion of derivatives instruments into the pension fund market has stalled

The aversion of many pension funds to derivatives is enshrined in restrictions or outright prohibitions in their trust deeds, the blueprints for their management. This fear has been reinforced by recent scandals, such as the collapse of Barings, nipping in the bud a shift towards greater exposure to geared instruments prompted, in part, by the maturing of many schemes.

Approximately half the pension funds in the UK are now allowed - or allow outsiders who manage money for them - to use financial derivatives. However even among those, only a small proportion actually do so. According to the WM Company, which measures the performances of 1,456 pension funds, only 479 of these make use of some form of derivatives. The underlying amount of derivatives traded by these funds in 1995 was in excess of \$40bn.

Traditionally, it is trustees and directors who oversee the management of funds have been risk-averse, because they are ultimately answerable to the pensioners. In recent years however, as funds have become more "sophisticated", they have been compelled to relax their restrictions in order to remain in line with fast-developing markets. But overall the use of derivatives is still strictly controlled.

"Pension funds are increasingly relying on these products for tactical asset allocation, and sometimes to manage their currency strategy," says Mr Graham Wood, a client consultant at the WM Company. "But the vast majority still use them only to hedge the currency exposure on their holdings of foreign equities."

Currency hedging is usually achieved through conventional currency swaps, rather than the use of more leveraged instruments. A few years ago, pension funds started to trade currency options, but the amounts involved have shrunk sharply in the wake of recent

incidents, such as the Barings collapse.

One futures and options salesman at a large Swiss bank recalls: "Between 1990 and 1994, we were doing more and more sophisticated options trades for pension funds. Most of them stopped, and those that still trade options now limit themselves to buying calls or puts."

Asset allocation via derivatives is usually a precursor to buying the underlying asset to avoid underexposure, or the possibility of missing out altogether on a strong market performance, the fund manager will invest in index futures - or futures funds - that replicate the market's performance during the time it takes to purchase the underlying assets, a process that can take several days for very large amounts. Usually, at the end of the stockpicking process,



Barings' hedge manager Nick Leeson's huge losses alarmed trustees

futures positions are substantially reduced. There is also a marked behavioural difference between companies that manage their pension funds internally and those that subcontract this task to outside fund managers. The former tend to shy away from derivatives altogether, mainly because their trustees are not equipped to evaluate the risks. When the funds are managed by outsiders, the trustees always impose strict guidelines.

According to Mr Heinz Bingle, managing director with Emcor, a US risk management consultancy, the most common caveats are "use derivatives only to hedge", or "absolutely no leverage". Structured notes are almost always excluded.

Incidents such as the Barings collapse or the losses incurred by Orange County have left their mark. Mr

Sobell Jaffer, deputy chairman of the European Derivative Investments and Funds Association (EDIFA), points to "a dip in derivatives usage between 1993 and 1995". According to a recent study by Greenwich Associates, a US financial markets consultancy, only 2 per cent of US and Canadian public sector pension funds and 3 per cent of endowments which did not use futures in 1995 would consider using them. In 1993 the levels were 6 per cent and 8 per cent respectively.

Attractive returns in emerging markets are increasingly tempting fund managers, but limited liquidity in most of these sectors has always acted as a deterrent. The use of equity swaps, which allow an investor to achieve the performance of a given market, say Mexico, by pledging the returns of another - shares listed on the London Stock Exchange for example - offers a very efficient way to circumvent liquidity problems. Index futures, as well as options on individual stocks, are used by some managers as a way to benefit from emerging markets' performance without investing large sums.

Fiscal considerations can also lead to the same logic: foreign investors in Italian bonds, for example, can claim back a 12.5 per cent withholding tax on coupons, but the process can take several months. Fund managers find it easier to trade Italian bond futures to achieve the same performance, while avoiding associated problems and costs.

New over-the-counter products offer the chance to lock in a market's performance and then retain the upside potential with a total guarantee against losses. The minimum funding requirement (MFR), which will be gradually implemented in the UK in coming years, is also likely to boost demand for hedging instruments. Mr Girish Reddy, co-head of equity derivatives at Goldman Sachs, believes that by imposing a minimum level of pension fund assets to liabilities, the MFR "is likely to make pension fund managers more sensitive to the downside performance of their assets relative to liabilities".

Global bonds: by Barry Riley

Sticking to the foothills

Funds' exposure to the mountain of outstanding debt is unlikely to rise significantly

Global bond returns once again switched rapidly from negative to positive in 1995, and after the disappointments of 1994 there was a strong case to be made for the establishment of global bonds as a separate asset class for pension funds.

The WM UK pension funds in the WM Company's WM 50 Universe did especially well in overseas bonds last year, scoring a return of 35.7 per cent, higher even than the 23.7 per cent return on UK equities and some eight percentage points higher than UK gilt returns. However, British pension funds remain unenthusiastic about global bonds. The average allocation was 11.4 per cent last year, up from 7.0 per cent over the past two years.

In contrast US pension funds appear to be taking a more positive view about the role of global bonds in their portfolios. A number of specialist bond management firms in London are benefiting from a flow of business across the Atlantic. "There is more movement in the US than in the UK so far," says Mr Paul Aberley, head of fixed interest at Lombard Oiler in London. But he complains about the lack of specialist mandates from UK pension funds: "It still seems pretty thin."

Much of the overseas bond exposure which is evident from the UK pensions industry figures appears to reflect limited allocations by the big balanced managers. There is little evidence that UK pension fund trustees are ready to hire specialist global bond managers. There is a contrast here with Continental countries such as the Netherlands and Switzerland, where there is at least a trickle of mandates. But in such countries there is a natural inclination to invest in

international bonds to diversify big domestic bond exposures. UK funds, however, would much rather diversify into overseas equities, which account for some 23 per cent of their portfolios.

"There's more activity in Europe where people are interested in diversification away from their own small domestic bond markets," says Mr Jon Baillie, who researches bond managers for consultants Frank Russell. "But to begin with, they want to extend elsewhere in Europe rather than globally."

What is the possible appeal of global bonds? First, they have recently been offering attractive, if rather variable, returns. Average annual overseas bond returns in sterling for UK pension funds have been running at 16.6 per cent over the past five years, as good as for UK equities, and with the advantage of adding diversification.

But there are two points to note here. One has been the weakness of the pound, which has raised all overseas asset returns. If sterling stabilises in future this attraction will disappear. The other element of the high return has been that the governments of mature countries all over the world have become deficit-ridden and have been forced to issue bonds at almost any price. The risks have therefore risen.

This desperation corresponds, on the other side of the balance sheet, to an attractive investment opportunity for big international institutions, at least so long as the issuing countries are not driven into

default. Total net issuance by the 13 or so governments with high enough investment ratings to figure in the JP Morgan or Salomon Brothers' global government bond indices is likely to run to more than \$500bn in 1996.

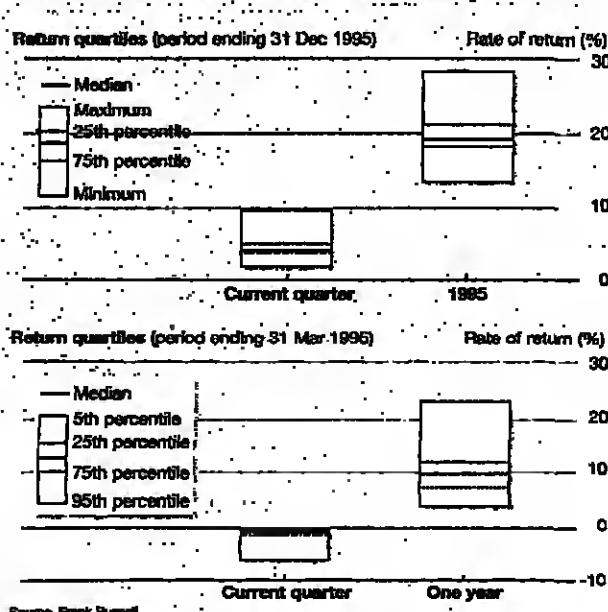
After the recent back-up in long-term bond interest rates, real yields are running at 4 per cent or more in many countries. This is attractive for long-term investors. On the other hand, the rise in yields has temporarily led to capital losses and, in many cases, to negative total returns for the first quarter of 1996.

The unhedged dollar return on the Salomon Brothers World Government Bond Index was minus 1.9 per cent in the January-March period. The worst markets, such as those of the UK and the Netherlands, showed negative returns of more than 3 per cent.

The rising volatility of global bond markets has become a disadvantage. It appears to reflect the periodical intervention of short-term participants like hedge funds and the proprietary trading desks of the big global banks. For British pension funds there is also a psychological block, in that foreign currency bonds offer no obvious close match to any of their liabilities. This obstacle may be made more formidable by the forthcoming imposition of a minimum funding requirement based only on UK equities and gilts.

Active global bond management also involves a lot of currency and yield curve speculation, which clashes with the

Global fixed income portfolios - unhedged



risk-averse approach of the typical pension fund trustee.

Meanwhile global bond managers are seeking to adjust to turbulent markets which have penalised those relying on long-term trends. Many managers picked themselves up last autumn after an unfortunate 18-month period of underperformance against the indices, only to run into turbulence during the winter which, at the extreme, knocked some 13 per cent off the price of the US Treasury long bond.

However, flash results for the Frank Russell universe for the first quarter suggest that the median manager has just beaten the benchmark. Over the past ten years global bond managers have found it fairly easy to beat the indices by adding value in currencies or dabbling in higher-

yielding corporate or second-line government paper.

But the risks appear to have increased, and 1994, in particular, was very difficult. In 1995, however, according to Frank Russell, the median manager just beat the index returns thanks to a good final quarter.

So why global bonds? The answer has to be: "Because they're there." Mr Henry Kaufman, the US-based bond expert, has pointed out that the global bond market has been growing at an average of 14 per cent a year for 25 years. The total of outstanding debt now approaches the equivalent of \$20,000bn.

Pension funds in many countries are seeing the potential of this global pool of bonds. But the risks are not always easy for plan sponsors to understand and accept.

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6 PENSION FUND INVESTMENT

UK managers by Barry Riley

Leaders pull further ahead

There is little long-term difference between top managers' performances

They do come back. That is a cause for satisfaction for several UK segregated pension fund managers - such as Morgan Grenfell and Prudential Portfolio Managers, where to varying degrees fortunes have revived after bad patches - and a source of hope for others, at present under a cloud.

But managing pension funds remains a hazardous business, in which a few winners grab the spoils. There is ever more concentration of business evident in our table of the top 25 managers: the top five this year together control 64 per cent of the funds managed, against 59 per cent a year ago.

The recent takeover of Gartmore by National Westminster Bank will have enhanced this trend, taking Gartmore's expanded operation towards the £20bn mark.

Several smaller managers, however, have suffered substantial business losses, most notably Henderson, which saw its funds halved. But maybe clients should have been more patient. As they headed for the exit, Henderson was clocking up one of the best one-year returns in 1995.

Only Morgan Grenfell seems to be making a convincing

Performance of segregated funds, to end 1995

	Over 5 years	Over 1 year
PDFM	+17.0	+18.0
Morgan Grenfell Asset Management	+16.8	+21.5
Gartmore Pension Fund Managers	+16.8	+19.4
Jupiter Asset Management	+16.7	+18.7
Schroder Investment Management	+16.6	+19.3
MSG Investment Management	+16.6	+19.2
Clerical Medical Investment Group	+16.5	+19.5
HSC Asset Management	+16.4	+21.2
CAPS Medlen	+16.3	+19.6
Prudential Portfolio Managers	+16.1	+21.5
Cazenove	+16.1	+20.9
Henderson Pension Fund Mgt	+16.0	+21.4
BZW Investment Management	+15.8	+20.8
Newton Investment Management	+15.8	+14.1
Flaming Investment Management	+15.7	+20.0
Baring Asset Management	+15.7	+18.1
Invesco	+15.5	+18.6
Thraeadie Asset Management	+15.4	+20.5
Rothschild Asset Management	+15.1	+21.1
Hambros Fund Management	+14.8	+16.2
BZW Barclays Global Investors	n/a	+20.4

Figures are median fund performance, including property. The only firm which explicitly excludes property is Cazenove.

attempt to catch up with the leading five. It is the star of current beauty contests, with the second-highest growth rate for funds under management in 1995, at 43 per cent.

The biggest gainer was the quantitative fund management arm of Barclays, now with the inelegant title of BZW Barclays Global Investors. Growth of almost 50 per cent reflected not only the continued adoption by pension fund trustees of low-risk, low-cost indexation but also the impact of the merger with Wells Fargo's asset management business.

Perhaps the year's most notable revival was right at

the top of the list, at the industry leader Mercury Asset Management (MAM). Despite the distraction of demerging from its former parent, SG Warburg, it enjoyed a cracking year for investment performance, although as usual it will not disclose any figures. It appeared to be seeing clear benefits from the internal restructuring it has undertaken in the last two years.

Twelve months ago it seemed possible that MAM might soon be overtaken in terms of funds under management by its fast-closing rival PDFM, an offshoot of Union Bank of Switzerland. If PDFM

had not suffered a bad year for investment performance it might have got near: its 1995 investment return was probably 5 or 6 per cent points worse than that of MAM, making a difference of more than £2bn to its total pension portfolios by the year-end.

MAM is the first pension fund manager in the UK to have faced the need for a second-stage restructuring. "Having gone through that process of rejuvenation we are feeling very good," says Mr Colin Clark, director of business development.

Many other companies have faced the challenge of a first-stage reorganisation as they grow from being a boutique to an institution: Newton, for instance, has recently been experiencing this transition. The second-stage crisis looms at a much larger size, when the

MAM is the first manager to tackle second-stage restructuring

manager can no longer deliver almost identical performance to all clients and must re-engineer its approach on a more diversified basis.

Six teams within MAM now handle its pensions business. Three tackle different size hands, starting at £15m. Another team deals with specialist mandates. Two others handle pooled funds and defined contribution schemes respectively.

All of them draw on central resources of research and risk control. Performance presumably varies between the teams, but was strong across the house last year, boosted by good stock selection both in the UK and overseas. To give an idea, the £2.5bn pooled fund - whose performance is disclosed - returned 21.1 per cent in 1995 against a CAPS median for this sector of 18.5 per cent.

Sometimes performance can be too good. The top position in our five-year performance league table has become a rather dangerous spot; two years ago Newton reigned supreme but has now suffered

Top 25 segregated pension fund managers

	Value of segregated funds			No of individual funds		Total funds managed		
	1994	1995	% chg	1995	1994	1995	% chg	
Mercury Asset Management	48,890	40,268	-20.0	1002	908	75,622	62,904	+20.2
PDFM	44,128	34,064	-22.8	368	336	48,238	37,515	+28.6
Schroder Investment Mngt	37,000	28,585	-22.7	256	246	74,000	57,885	+28.5
Gartmore Pension Fund Mngers	21,547	14,382	-33.7	206	171	170,000	23,576	+10.0
Morgan Grenfell Asset Mngt	17,802	15,301	-13.5	211	210	24,778	20,828	+18.0
NatWest Investment Mngt 2	12,265	8,846	-27.8	155	125	60,805	30,827	+98.9
Hill Samuel Investment Mngt3	11,836	9,800	-16.7	122	87	34,158	30,800	+10.9
Flaming Investment Mngt	10,850	n/a	n/a	95	n/a	5,826	48,831	+14.4
Prudential Portfolio Mngers	9,148	7,589	-16.9	57	52	82,100	70,800	+16.0
Spring Asset Management	7,300	6,500	-11.0	93	124	25,800	27,800	-7.9
Schroder U.K.	5,906	5,283	-10.6	48	76	11,200	10,589	+5.8
Newton Investment Mngt	4,981	4,226	-14.9	199	180	11,821	10,061	+17.5
BZW Investment Mngt*	4,795	4,179	-12.9	84	88	9,887	8,648	+13.8
M & G Inv Mngt	4,806	4,474	-7.5	33	29	34,653	31,932	+8.5
Jupiter Asset Mngt	3,899	3,009	-22.6	40	31	16,890	14,032	+20.2
Clerical Medical Inv. Group	3,497	2,764	-20.5	41	36	5,223	4,012	+29.7
Cazenove	2,146	2,108	-1.8	44	44	14,138	11,849	+18.9
Henderson Pension Fund Mngt	1,981	4,159	+108.5	90	85	8,160	7,494	+8.9
Kleinwort Benson Inv Mngt 4	1,699	1,765	+3.8	63	77	11,180	11,889	-5.8
Hambros Fund Mngt 5	1,416	n/a	n/a	32	30	7,000	n/a	n/a
Rothschild Asset Mngt	1,287	1,888	+46.7	30	40	10,026	10,210	-1.8
Invesco	1,254	1,909	+52.7	37	67	53,816	41,723	+28.0
Thraeadie Asset Mngt	1,216	1,070	-12.0	14	15	29,544	27,898	+6.7
Total	270,275	213,238	-20.7	3,455	3,236	915,468	613,263	+49.3

* Mergers of BZW Investment Management's Quantitative Division with Wells Fargo (BZW Investment) and AIG (AIG Investment) in 1994. 1994 total funds adjusted to reflect sale of funds managed by a US subsidiary in 1995. 5 Formerly AIG. Figures are for Hambros Bank, 5 consolidated scheme management.

Pooled pension funds

Largest Pooled Funds	£bn
Scottish Widows	5.0
Scottish Equitable B'	2.7
Mercury Mgd Fund Service	2.5
Confederation Life	2.5
Prudential	1.8
Newton Exempt Fund	1.3
Scottish U.T.	0.9
Gartmore	0.9
Gen Accident	0.9
Standard Life	0.9

Notes: as at December 31 1995. Source: Combined Annual Performance Review.

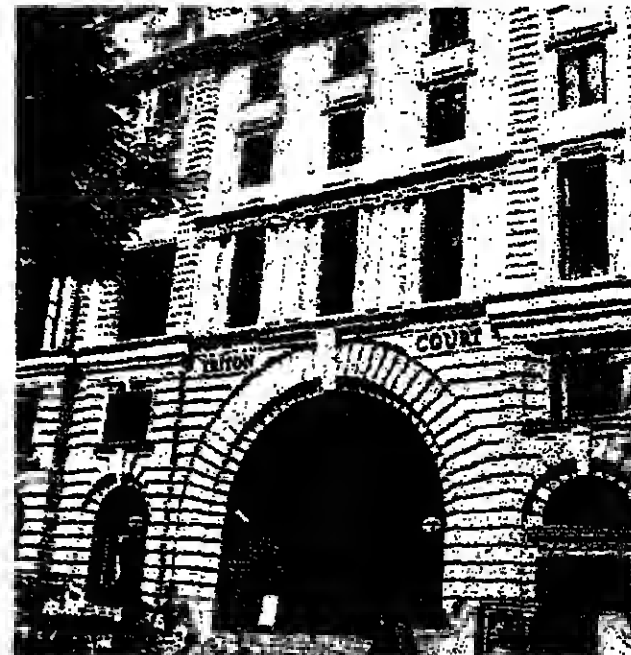
two bad years in a row, while last year's high-flier PDFM slumped in 1995 although it is still narrowly holding off the competition over five years.

In a year for fashionable growth stocks, value-oriented PDFM was a fish out of water. It was underexposed to equities too because it believes that stock markets are becoming seriously overpriced.

PDFM's investment director Mr Tony Dye is one of the City of London's biggest bears. Thus the 1995 edition of the company's survey Pension Fund Indicators grimly warns pension fund sponsors to "allow for the possibility of a future spell of dull returns".

As for Newton, it had a terrible first quarter in 1995, especially in overseas equities. "We've had to tighten up the investment process," admits founder Mr Stewart Newton, who this year has relinquished the chief executive's role and has refocused on his responsibilities as investment director.

There is more specialisation among Newton's individual managers, and a Quantec risk control system has been adopted. But Mr Newton says there is no reason to change the basic approach which produced excellent performance



The headquarters of PDFM: the firm's performance dropped in 1995

for many years.

In any case, Newton is not seeking new pension fund business. "We don't expect to reopen until we are perceived by the outside world to have got things together," says Mr Newton. He adds that last year's deal with Royal Bank of Scotland, which now has a large minority stake in the company, did not cause the performance problem but may have delayed the response.

Prudential Portfolio Managers is much further along the road to recovery, having picked up after bad performance in 1993. In 1995 it shared top spot with Morgan Grenfell, scoring a return of 21.5 per cent, almost 2 percentage points ahead of the median. "The Pru aims to be a 'safe'

manager. "We have reviewed the way we put portfolios together to ensure that deviations from the median performance are dampened down," says Mr Rodney Dennis, UK investment head at PPM.

Moreover Prudential sees scope to offer pension fund clients the benefit of its extensive experience as a big life office in modelling assets and liabilities. The trend towards defined contribution structures could also be in the Pru's favour.

So the short-term ups and downs of fortune continue to affect segregated pension fund managers quite strongly. But in the long run, or even the medium term, is there a great deal of difference between them? Is there a reasonable hope of picking a manager that

Pooled pension funds

Top 10 returns (5 yrs)	£bn
Abbey Life	22.7
Cleghow Invmt Mngs	22.7
Morgan Grenfell	18.3
Bank of Ireland	17.7
Schroder U.K.	17.7
Barrat's	17.4
Fidelity	17.4
Mercury Mgd Fund	16.8
Albert E Sharp	16.6
Swiss	16.6
CAPS Medlen	15.4

Based on property performance, available to 31/12/1995. 50 Assets managed. Source: CAPS.

consistently outperform?

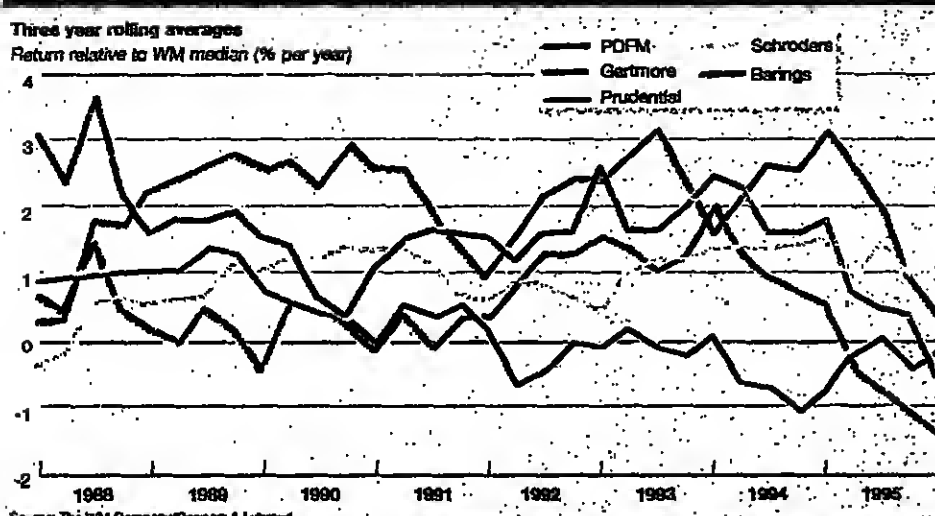
Not according to a study of three-year returns by Mr John Shuttleworth, an actuarial partner at accountants Coopers & Lybrand. The results, he says, are "not kind to the investment managers".

A typical trustee objective is to outperform the median fund by 1 per cent a year over a rolling three-year period. But no manager has consistently achieved this target over the past five years. Only Schroders has achieved even reliable 0.5 per cent outperformance: it had a quiet 1995 in terms of one-year returns, but its track record continues to pull in large volumes of new business.

A feature of the latest five-year performance league table is that the leading managers are in fact all tightly bunched. The top four active managers (excluding the disclosure-shy MAM) are confined within a spread of 0.4 per cent in terms of annualised return.

Perhaps this is not surprising, given that asset allocation varies only by tiny margins in most cases (PDFM is an exception) and stock selection volatility is nowadays controlled by sophisticated risk control systems. The herd is still running strongly.

Segregated fund performance



Source: The WM Company/Coopers & Lybrand



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PROFILE Gary Brinson

US manager with balance

Mr Gary Brinson's entry into the UK pension fund market is a sign that US-based global managers are becoming more aggressive. As a start, his company has won a US specialist brief from the Civil Aviation Authority's pension fund.

Most of the pension fund mandate traffic across the Atlantic has so far been from east to west, as British investment managers sell their global investment expertise to US clients. But Mr Brinson is one of the newer breed of internationally-oriented US managers.

Brinson Partners was founded in 1981 as a unit of First National Bank of Chicago. After being spun off in 1989 it was absorbed into Swiss Bank Corporation in

US investment managers now have an exploitable opening in the UK pension fund market

April 1995. Under the name SBC Brinson it now runs all SBC's global institutional management business outside Switzerland.

Worldwide assets totalled \$33bn at the end of last year, and within that the company managed over \$10bn in global portfolios for US institutional clients, making it the largest active manager in this sector. Half of the group's total assets are outside the US.

Brinson Partners - this is still the trading name within the US - is the exception to the rule that globally-oriented

US managers are usually to be found on the east or west coasts, in Boston or Los Angeles, for example. "Chicago is a terrific place," insists Mr Brinson. "We're not caught up in the fads and fancies of Wall Street. We can march to the beat of our own music."

But he also maintains offices in six other centres around the globe, including London. Although strategy is decided centrally in Chicago, SBC Brinson aims to carry out research and analysis as much as possible within local markets.

US-based managers now have an exploitable opening in the UK pensions market. The poor performance of London-based managers in US equity stock selection over the years was further emphasised in 1995, when the CAPS median fund in the UK returned nearly 4 percentage points less than the 37.9 per cent index return on Wall Street.

These UK managers also got asset allocation wrong - last year they were extremely underweight in Wall Street, which was easily the world's best-performing large stock market. "US equity accounts will be an entry point," says Mr Brinson, who clearly has his eyes on broader global mandates for UK clients eventually.

In fact he is entirely sympathetic to the view that Wall Street is overpriced. But as he points out, "being too early is indistinguishable from being wrong". Brinson Partners' basic style is that of a multi-market, multi-asset class manager. It offers a global balanced style to its institutional clients, which is rather unusual at this time of increasing specialisation. "Recently we have shifted



Gary Brinson: he is sympathetic to the view that US is overpriced

money out of equities, especially US equities, into non-US bonds," says Mr Brinson. The firm has also found Brady bonds attractive - more so than equivalent emerging market equities.

SBC Brinson is a value investor which focuses on future cash flows. The assumption is that from time to time market prices and fundamental values get out of line.

"US investors spend a lot of time investing by looking backwards in the rear-view mirror," says Mr Brinson.

"That creates excesses." He adds: "The US equity market overvaluation is now greater than at any time since the summer of 1987. The prospective long-term return on US equities is 7 to 7 1/2 per cent and investors won't be satisfied with that. The prospective return should be 8 1/2 to 9 per cent."

"Equities could go through a period of Jack-in-the-box returns. Or the correction could be violent," he concludes.

Barry Riley

The US: by Maggie Urry

Perplexed by their success

Funds may tinker with their asset allocations to sustain high levels of return

After a year like last one, when the Dow Jones Industrial Average rose by roughly a third, many US pension fund managers are asking: "What do we do for an excess?"

According to Greenwich Associates, the investment management research group, the typical US pension fund had 46.4 per cent of its assets in US equities at the end of 1995, up from 44.8 per cent a year earlier - a marked shift given the size of the industry.

One plan sponsor which contributed to Greenwich Associates' annual survey, put the resulting question thus: "We have had superior returns - should we now make a further change in asset mix?"

Mr John Webster, a Greenwich Associates partner, says "It is incredibly difficult to know what to do after achieving a terrific return in the US." One answer is to invest more internationally, a trend which has been apparent for some years among US funds.

Figures from InterSec Research show growth in the proportion of funds invested internationally. Mr Jim Waterman, director of research at InterSec says: "Some funds think international equities present an attractive alternative to domestic," but he adds, the rise in international exposure is "a long term process rather than a tactical one".

However, international investment poses a problem for funds, Mr Webster says. While many are interested in emerging markets, and particularly in Pacific Rim countries, their lack of liquidity and higher risks makes them unsuitable destinations for more than a small amount of funds' assets.

Meanwhile, Japan is a difficult market to assess at present. Europe also raises challenges; some markets are near

record highs, while reunification still poses problems in Germany.

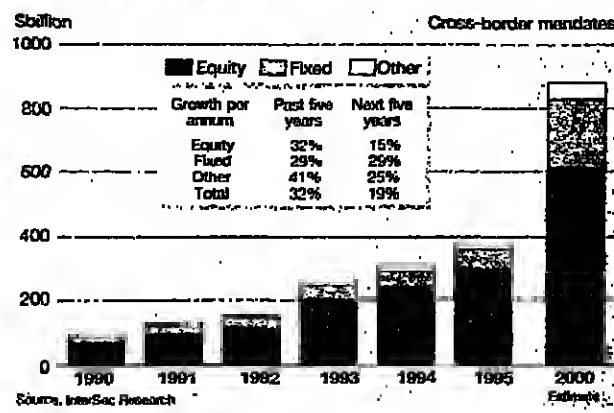
Even so Greenwich Associates found that investors were expecting a 10.5 per cent return a year from their international equity investments, while US equities are forecast to return 9.8 per cent. They expect their asset allocation of international investments to rise over the next three years, while domestic equity weights are due to fall slightly.

Ms Gloria Reeg, head of consulting at Frank Russell, the pension consultants, says that in general funds are not changing their asset allocation targets, although many are looking at how to rebalance their portfolios in the light of last year's returns. Should they use cashflows to adjust percentage weightings, or incur transaction costs in sell-

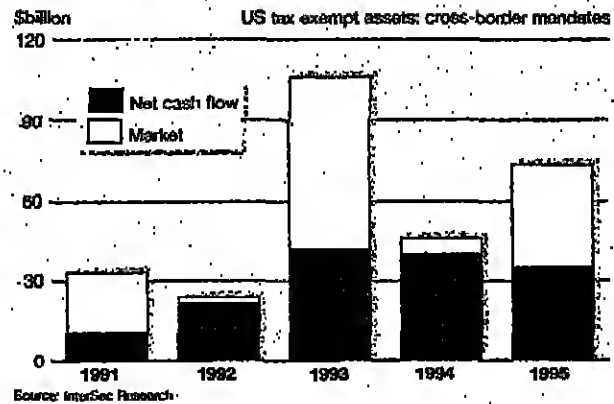
Sector	1991	1992	1993	1994	1995*
Corporate \$bn	-28.2	-32.4	-24.9	-10.2	-17.9
as % of assets	-2.4	-2.6	-2.0	-0.6	-1.4
Public \$bn	+5.4	+6.2	-5.7	-2.7	-4.6
as % of assets	+0.5	+0.5	-0.5	-0.4	-0.3

Notes: *Expected level of cashflow. Source: Greenwich Associates

US tax exempt assets



Sources of growth



Sector	1994	1995*
Corporate	-15.0	-25.2
DB	+4.8	+7.3
Public	-3.1	-4.6
DC	+0.3	+0.1

Notes: *Expected level of cashflow. Source: Greenwich Associates



Together but separate: DC plans are winning followers

log assets from an area where they are now overweight?

One beneficial effect of the rise in the US equity market has been to offset the negative effect of lower interest rates on pension fund solvency.

As pension funds use long term interest rates to discount future liabilities, a fall in interest rates actually increases funds' future outgoings. Thus in 1994, when interest rates rose and bond markets fell, reducing the value of funds' fixed income assets, solvency improved

because liabilities dropped by more than asset prices.

Ms Reeg estimates that in 1995 the impact on liabilities of lower interest rates was more than offset by an increase in assets through the rise on Wall Street, although she warns that final figures are not yet available.

Aside from the question of where to invest their money, plan sponsors are also looking hard at the funding basis of pension schemes. The choice is between defined benefit (DB) plans, where pension levels are fixed according to a pre-set formula, and contributions have to be made to meet these liabilities, and defined contribution (DC) funds, where contributions are fixed and the final level of pensions depends on investment performance.

The latter type continues to attract more money. Indeed, as the Greenwich Associates survey found, while DB plans as a whole are seeing a net cash outflow as benefit payments exceed contributions, DC plans are still enjoying positive net cash flows.

However, plan sponsors are increasingly concerned about educating members of DC plans to make wise choices. They can choose where their money is invested and can dip into their "savings" before retirement. Both freedoms can lead to poor choices being made, seriously depleting the final level of pensions.

While most experts believe that equities offer the best long term returns, some employees prefer the "safety" of fixed interest investments. To counter this, many plan sponsors are now offering so-called lifestyle funds. These take into account an employee's age and expected retirement date and adjust the portfolios accordingly.

Over the life of the fund the asset allocation is changed gradually, becoming safer as its members age. Younger members contribute to a fund with a more aggressive approach, while the investments of those near retirement are more conservative.

The other worry - that employees will take money out too early - can be countered by more education.

Japan: by Gerard Baker

The elderly are expensive

Liberalising the pension fund market will not forestall a cash crisis

Few countries face a pensions crunch on the scale of Japan's. Not only does the nation have a rapidly ageing population, soon set to put a heavy burden on public and private sector pension fund finances, but the financial chaos of the last few years has cut deep into the returns actually achieved by those funds. Add to that a panoply of regulations that restrict the efficiency of the country's pensions market, and you have the makings of a real crisis.

But there are signs that the authorities have recognised the gravity of the problem. The opening of the country's financial markets are the route they have chosen to ease the pressure on the system.

Japan's arrangements for retirement provision are characteristically complex. All employees, private and public sector, pay a flat sum into the national pension scheme. Most of them also pay a higher earnings-related element into another state-run fund. This figure is currently 16.5 per cent of salary, split evenly between employer and employee.

But since that figure is still expected to produce a pension of roughly just 45 per cent of final salary for most employees, a growing number are now also covered by company plans, again paid for jointly by employer and employee.

Japanese pension funds are worth about ¥190,000bn (\$1,759bn) in all, of which nearly three-quarters by value are held by the public sector.

In the next two decades, the demand for these funds is set to grow at a pace way beyond their capacity to meet it. A combination of radical demographic changes and poor investment returns have put Japan's pensions system in a vice.

The most pressing problem is the familiar one of an ageing population. Within twenty years the proportion of pensioners within Japan's population will have risen from under 15 per cent to 25 per cent. The burden on today's workforce is growing heavier. According to research by Goldman Sachs, the US investment bank, while today's pensioners are likely to receive total pension payments of over four times the sum of their contributions made in their working lives, workers in their twenties will actually have to pay more in contributions during their careers than they will receive in pension payments.

The government has belat-



No passengers: the young could face a heavy burden supporting the old when they are old enough to work

edly begun to increase mandatory contribution rates for employers and employees in the supplementary pension schemes, with the aim of meeting this requirement. But even these changes are unlikely to suffice, because the demographic problem has been compounded by poor investments. Most pension fund assets are entrusted to life insurers and trust banks to invest. Over the last five years the returns achieved by these managers have been hit hard by the long financial slump. In the late 1980s they invested in all sorts of risky assets. Their clients have paid the penalty since.

For example in the 1980s life insurance companies promised returns to their investors well above the yield on the benchmark 10-year government bond. They felt confident of their ability to meet these guarantees because they were securing big capital gains on their other assets.

But at the start of the 1990s they were hit by an unprecedented series of blows: the stock mar-

ket collapsed; land prices plummeted, the yen rose sharply; and interest rates began to fall. Within a few years life insurers were no longer able to achieve the yields promised, but initially they continued to guarantee them nonetheless. Only as the recession deepened three years ago did the life companies helpfully begin to cut their guaranteed yields.

In a normal market pension funds would have moved their assets to more successful managers as returns began to slide. But Japan is different. A tough regulatory system ensured that the life companies and the trust banks enjoyed a virtual duopoly in asset management.

In 1985 some outsiders - including several foreign trust banks - were permitted to compete for business from the private sector. But the market share gained by these outsiders was small.

As the returns achieved by established managers fell, the pressure for change intensified. Japanese public sector fund managers in particular looked

on in horror as their funds, held captive by the life companies and trust banks, underperformed world markets. Between 1980 and 1993, the average pension fund in the US achieved a compound yield of over 50 per cent, but in Japan the figure was 10 per cent.

Two years ago, acutely aware of the long-term demographic time-bomb, the authorities decided to act. They agreed to open up much more of the market to outsiders.

The biggest changes were made to the management of public sector pension funds. Nempuku, the Japanese body responsible for allocating up to \$200bn in funds collected from national pension contributions was the focus of the change.

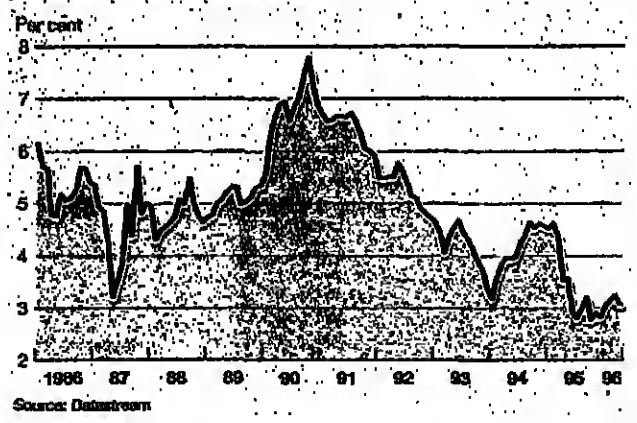
Until a few years ago all these funds were entrusted to the life companies and trust banks. Now the entire fund is open to all comers, and US investment advisers have already moved in, taking some big contracts.

The other big reform has been to allow corporate pension funds to hire foreign investment managers, a change that is already beginning to bear fruit. In the last year more than twenty big Japanese companies have allocated part of their pension funds to foreign managers for the first time.

Nevertheless only a relatively small proportion of the total market can be described as genuinely open. And regulations governing the operation of such funds continue to limit pension funds' potential returns.

But most foreigners believe the changes now in place have ushered in a revolution whose biggest beneficiaries will be the ever-expanding ranks of future Japanese pensioners.

Japan: 10 year government bond



Source: Datastream

Continental Europe: by Peta Hodge

Governments beat a slow retreat

The EU is inching reluctantly towards introducing more private sector pension provision

Pre-funded private sector pension provision in Europe is poised for growth. The mix of state provision and unfunded private pension promises that currently dominate will become increasingly unsustainable as the ratio of pensioners to workers continues to expand.

So far the growth of private-sector pension provision in Europe has been unspectacular. Tax regimes are generally not designed to encourage the establishment of private funded schemes, and governments which seek to reduce state provision face considerable opposition - particularly in countries where dependence on state pensions is high.

As a recent FT management report, *Pension Fund Investment in Europe*, points out, in the UK, where the average state pension is worth less than 30 per cent of average pay: "The government's semantic reduction in the level of the state pension until very recently met with barely a murmur of protest." In Italy, however, where state pensions account for almost two-thirds of pensioners' average earnings, proposals for similar reforms met with mass demonstrations and threats of a national strike.

Opponents of change also fear that a switch from state to private provision will increase indirect labour costs and fuel unemployment.

Although European governments seem united in their desire to shed some of their pensions burdens, there is little homogeneity in their proposals for the future. Nor is there any uniformity in current practice. Whereas France and Italy have virtually no private sector pension funds, the value of pension assets in the



In Germany workers' pensions are provided using book reserves, a system France may also adopt

Netherlands and Switzerland already exceeds their GDP.

The UK has the largest pension fund sector in Europe. According to the recent FT report, UK funds accounted for around 60 per cent of Europe's \$1,450bn in pension fund assets at the end of 1994.

The UK also has the most established pensions advice industry in Europe, which sees itself as the natural beneficiary of an expanding European pensions market. What many UK investment managers, consultants and performance measurers are already beginning to realise however, is that the realisation of Europe will not necessarily adopt the same methods as the UK for expanding private provision.

In France, for example, there is considerable interest in covering pension liabilities through book reserves in the balance sheet of employers, rather than building up separate funds. Book reserves have generally proved to be a very effective way in Germany where they are worth some DM300bn (\$190bn).

Even if a majority of Euro-

pean governments were to opt for a system of fully-funded private pension provision, it would be unlikely to greatly boost demand for foreign assets. According to figures from consultants William M Mercer, the average pension fund in Denmark, Finland, Germany, Portugal and Spain, has more than three-quarters of its money in domestic assets, which are mainly bonds.

This bias towards domestic assets is partly attributable to the investment restrictions which still exist in many countries. The European Commission would like to remove these, believing that more overseas investment would allow pension fund assets to boost capital growth. But it faces entrenched opposition in many countries. A report by the European Federation of Retirement Provision (EFRP), to be published later this year, is expected to argue that employers' costs could be reduced substantially if greater investment freedom allowed pension funds to achieve enhanced returns.

The barriers to better investment performance are not just legal ones. Many European pension funds fail to take full advantage of the limited investment freedoms already available to them. There are a number of possible reasons for this, says Mr Koop de Ryck of the EFRP, including cultural bias and risk averseness. "It is not always possible to get better performance from outside the domestic market," he adds. "In the Netherlands some money managers have had a poor experience from diversification, and we have seen the same situation in Belgium and Switzerland. Diversification reduces risk but doesn't necessarily improve returns."

Even so, European pension funds are expected to become more international in their investment outlook. That does not mean that UK investment managers can expect new business to fall into their laps. "The market is becoming increasingly competitive," suggests Mr de Ryck. "The Americans are moving in with enormous capacity and different services, and Germany is

getting in through the acquisition of investment managers by German banks."

To be successful in the wider European market, UK managers must be prepared to tailor their products. Analysts expect that many of the new pensions schemes that will be set up in the next few years will be established on a defined contribution (DC) basis, rather than on the defined benefits (DB) basis once popular with employers in the UK. In DB schemes the employer bears the risk of investment under-performance, but it is carried by the scheme member in a DC scheme. "This dictates a different role for the investment manager (see article on p5).

In the UK, pooled arrangements are mainly used by smaller funds where segregated management is not deemed cost effective. In other parts of Europe funds of all sizes are happy to use collective investments. European funds, which do not share UK counterparts' long history of active management, are also more prepared to consider using methods of investment in which computers sift big volumes of data in search of opportunities.

Ms Julia Hobart of consultants William M Mercer warns against reading too much into apparent trends however - particularly in such an immature and rapidly changing market. "This may be more of a client thing than a country thing," she suggests. "Large funds in most established markets tend to have quite a lot in common," she says.

On the whole, Ms Hobart believes the prospects for UK investment managers in continental Europe are fairly good. "Domestic managers often get the largest proportion of assets," she says. "But when looking for specialist management outside their domestic markets, pension funds have tended to favour UK managers. Ultimately selection boils down to quality and whether a manager has the necessary skills."

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CURRENCIES AND MONEY

MARKETS REPORT

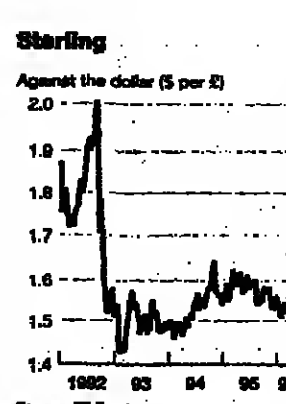
Election worries push sterling to two year low

By Philip Gawth

Nervousness about heavy government losses in today's local elections yesterday saw sterling fall to a two year low against the dollar.

15 month high, at L1,016, before closing at L1,021. The South Africa road traded steadily again, finishing at R4.33 against the dollar, from R4.3225. South African markets were also closed.

Despite the fact that consumer demand is showing signs of picking up, calls for lower interest rates and even lower tax rates, later this year, remain. Gilts offer attractive yield pick-up relative to some European markets, but certainly not relative to Treasuries.



have been some indications in Europe which testify to independent dollar strength, and out of step D-Mark weakness. Mr Prendergast called the dollar's breach of SF1.24 against the D-Mark, the equivalent of DM1.30 against the D-Mark, the resilience indicated by the dollar's breach against the yen, and the breach of FF5.15 against the French franc, as evidence of dollar strength.

The dollar turned in a steadier performance, finishing slightly firmer against the yen, following recent weakness, at Y105.116, from Y104.755. It was unchanged against the D-Mark at DM1.5336.

There are a number of concerns surrounding sterling. Mr Kit Jukes, currency analyst at NatWest Markets in London, said the lira did at one point rally to an

Mr Brian Martin, economist at Barclays in London, said he did not expect any self-off to be too rapid. "There is reasonable buying interest at lower levels."

both the dollar and the D-Mark showed that there were "specific sterling concerns in the market." But he said the depth of market pessimism was already so great as to offer protection against anything but the very worst election outcome.

Despite the dollar's recent losses against the yen, there

POUND SPOT FORWARD AGAINST THE POUND

Table with columns: May 1, Closing mid-point, Change on day, Bid/offer spread, Day's high/low, One month rate, Three months rate, One year rate, Bank of England index.

Found in New York

Table with columns: May 1, Bid, Ask, Prev close.

DOLLAR SPOT FORWARD AGAINST THE DOLLAR

Table with columns: May 1, Closing mid-point, Change on day, Bid/offer spread, Day's high/low, One month rate, Three months rate, One year rate, J.P. Morgan index.

OTHER CURRENCIES

Table with columns: May 1, Bid, Ask, Prev close.

WORLD INTEREST RATES

Table with columns: Money Rates, Euro Currency Interest Rates, Short term rates, Three month Eurodollar futures, Three month Eurodollar futures, Three month Eurodollar futures.

CROSS RATES AND DERIVATIVES

EXCHANGE CROSS RATES

Table with columns: May 1, Bid, Ask, Prev close.

JAPANESE YEN FUTURES

Table with columns: Open, Latest, Change, High, Low, Est. vol, Open int.

STERLING FUTURES

Table with columns: Open, Latest, Change, High, Low, Est. vol, Open int.

SWISS FRANC FUTURES

Table with columns: Open, Latest, Change, High, Low, Est. vol, Open int.

UK INTEREST RATES

LONDON MONEY RATES

Table with columns: May 1, Over-night, 7 days, One month, Three months, Six months, One year.

EMU EUROPEAN CURRENCY UNIT RATES

Table with columns: May 1, Bid, Ask, Prev close.

NON ERM MEMBERS

Table with columns: Bid, Ask, Prev close.

SPREAD BETTING ON OVER EIGHTY MARKETS

Table with columns: Bid, Ask, Prev close.

BASE LENDING RATES

Table with columns: Bid, Ask, Prev close.

US TREASURY BILL FUTURES

Table with columns: Bid, Ask, Prev close.

EUROPEAN OPTIONS

Table with columns: Bid, Ask, Prev close.

OFFSHORE COMPANIES

Table with columns: Bid, Ask, Prev close.

EURODOLLAR OPTIONS

Table with columns: Bid, Ask, Prev close.

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FAST 64 BIT SATELLITE TECHNOLOGY FOR COMPLETE REAL-TIME DATA OF THE US AND EUROPEAN EXCHANGES

The FT GUIDE TO WORLD CURRENCIES, published in Monday's newspaper and covering over 200 currencies.

Bank of Communications (The Development Bank of the Republic of China)

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150

MENT TRUSTS - Cont.

LONDON SHARE SERVICE

INV TRUSTS SPLIT CAPITAL - Cont.

Table listing investment trusts with columns for Name, Price, and % Change.

LEISURE & HOTELS - Cont.

Table listing leisure and hotels companies with columns for Name, Price, and % Change.

OTHER FINANCIAL - Cont.

Table listing other financial companies with columns for Name, Price, and % Change.

PROPERTY - Cont.

Table listing property companies with columns for Name, Price, and % Change.

SUPPORT SERVICES - Cont.

Table listing support services companies with columns for Name, Price, and % Change.

AIM - Cont.

Table listing AIM companies with columns for Name, Price, and % Change.

OTHER INVESTMENT TRUSTS

Table listing other investment trusts with columns for Name, Price, and % Change.

INVESTMENT COMPANIES

Table listing investment companies with columns for Name, Price, and % Change.

LEISURE & HOTELS

Table listing leisure and hotels companies with columns for Name, Price, and % Change.

OIL EXPLORATION & PRODUCTION

Table listing oil exploration and production companies with columns for Name, Price, and % Change.

OIL, INTEGRATED

Table listing integrated oil companies with columns for Name, Price, and % Change.

PHARMACEUTICALS - Cont.

Table listing pharmaceutical companies with columns for Name, Price, and % Change.

PROPERTY

Table listing property companies with columns for Name, Price, and % Change.

RETAILERS, GENERAL - Cont.

Table listing general retailers with columns for Name, Price, and % Change.

SUPPORT SERVICES

Table listing support services companies with columns for Name, Price, and % Change.

TOBACCO

Table listing tobacco companies with columns for Name, Price, and % Change.

TRANSPORT

Table listing transport companies with columns for Name, Price, and % Change.

WATER

Table listing water companies with columns for Name, Price, and % Change.

AIM

Table listing AIM companies with columns for Name, Price, and % Change.

AMERICANS

Table listing American companies with columns for Name, Price, and % Change.

CANADIANS

Table listing Canadian companies with columns for Name, Price, and % Change.

SOUTH AFRICANS

Table listing South African companies with columns for Name, Price, and % Change.

GUIDE TO LONDON SHARE SERVICE

Prices for the London Share Service delivered by FT Stock, a member of the Financial Times Group. Detailed information is based on those used for the FT-SE 100.

Templeton advertisement: Seeking out under-valued investments across the globe. HOW TO INVEST THE TEMPLETON WAY. AS EXPLAINED BY THE UGLY DUCKLING.

FT Free Annual Reports Service: You can obtain the current annual/interim report of any company included with FT. Please quote the code FR216.

Handwritten signature or mark at the top center of the page.

FT MANAGED FUNDS SERVICE

FT Cyteline Unit Trust Prices are available over the telephone. Call the FT Cyteline Help Desk on (+44 171) 878 4578 for more details.

Main table containing financial data for various funds, organized into columns such as 'Credit', 'Other Offshore Funds', and 'Offshore Insurances'. Each entry includes fund names, dates, and numerical values.

OFFSHORE INSURANCES

MANAGED FUNDS NOTES: A detailed section providing additional information and disclaimers regarding the fund data presented in the table.

LONDON STOCK EXCHANGE

MARKET REPORT

Struggling Footsie takes another look at 3,800

By Steve Thompson, UK Stock Market Editor

The closure of much of continental Europe for the May Day holiday, plus the impending UK local elections and US non-farm payroll report for April, made for a quiet trading session in UK equities.

left the leaders well behind since the start of the year, kept more of their shine, with the FT-SE Mid 250 index posting its third consecutive retreat and ending the day 11.7 down at 4,540.1.

Hally depressed Wall Street, where the Dow Jones Industrial Average came under pressure. But sentiment there quickly picked up and the Dow was showing a 20-point-plus gain an hour after London closed for business.

Turnover in equities at 6pm reached 790.4m shares, a figure that surprised dealers but which was heavily weighted to non-FT-SE 100 stocks that accounted for more than 60 per cent of the day's business.

Around the individual sectors the composite insurers provided plenty of interest, with General Accident hand hit by the warning that profits would be badly affected by the weather which hit the company's main markets, the UK and North America, over the winter.

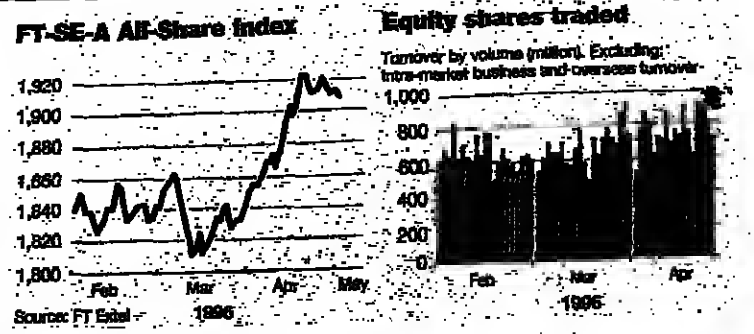


Table with 2 columns: Index Name and Value. Includes FT-SE 100 (3806.0), FT-SE Mid 250 (4540.1), FT-SE 350 (1825.9), FT-SE All-Share (1908.39), and various industry indices like FT Ordinary Index (2831.3) and FT Non-Fin p/e (17.53).

Grid mystery deepens

The mystery over Hanson's sale of 210m shares in National Grid deepened yesterday as a buyer failed to materialise.

to some that it might have taken and sold 0.3 per cent of the company as commission for the deal.

Builders retreat. Kleinwort Benson turned less positive on housebuilding shares, sparking a minor shakeout for the sub-sector.

Rank ahead

Shares in Rank Organisation moved against the poor market trend, adding another 6% at 53 3/4p on break buying following Tuesday's lunch with a number of influential brokers.

expect profits to fall by between 20 per cent and 27 per cent to about 245m, and one analyst added: "Let us just say few people expect the company results to surprise on the upside."

short-haul Channel ferries. According to one London analyst, a merger could see combined capacity go down by between two or three ferries.

following the announcement that the group had lost the agency rights for Lanson champagne, a high profile brand. One analyst said that while Allied was playing the loss down, the market adopted a much more bearish stance.

FUTURES AND OPTIONS

Table with multiple columns: Index Name, Open, Settle, Change, High, Low, Bid, Ask, etc. Includes FT-SE 100 INDEX FUTURES (LIFE) and FT-SE 100 INDEX OPTION (LIFE).

Courtauld's hit

Hard pressed textile analysts were left shell-shocked by the latest announcement from Courtauld's Textiles.

Builders retreat

Kleinwort Benson turned less positive on housebuilding shares, sparking a minor shakeout for the sub-sector.

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MARKET REPORTERS

Peter John, Joel Kibazo, Jeffrey Brown, Les Wood.

LONDON RECENT ISSUES: EQUITIES

Table with columns: Issue Name, Price, Yield, etc. Includes F.P. 28.4, F.P. 15.0, F.P. 0.71, etc.

FT GOLD MINES INDEX

Table with columns: Index Name, Value, etc. Includes Gold Mines Index (2269.07), Africa (13), Australia (12), etc.

FT-SE Actuaries Share Indices

Table with columns: Index Name, Value, etc. Includes FT-SE 100, FT-SE Mid 250, FT-SE 350, FT-SE All-Share, and various industry indices.

Hourly movements

Table with columns: Index Name, Open, High, Low, etc. Includes FT-SE 100, FT-SE Mid 250, FT-SE 350.

FT-SE Actuaries 350 Industry baskets

Table with columns: Basket Name, Value, etc. Includes Bldg & Constrn, Pharmaceuticals, Water, Banks, Retail.

Advertisement for Investors featuring a large image of hands holding a globe. Text includes: "To bring together those who have money to invest with those who seek to raise it is a fundamental of international investment banking." and "INVESTMENT BANKING FROM A TO Z".

WORLD STOCK MARKETS

Table of world stock markets including sections for EUROPE, ASIA, SOUTH AMERICA, and AFRICA. Each section lists various stock indices and individual company shares with their respective prices and changes.

Vertical text on the left side of the page, partially obscured by the main table, containing financial news snippets.

Advertisement for Rockwell, featuring the text 'Rockwell's advanced technology is helping railroads improve performance and promote safety' and the Rockwell logo.

Table titled 'INDICES' showing various market indices such as the Nikkei, Dow Jones, and others, along with their current values and percentage changes.

Table titled 'US INDICES' providing detailed data for major US stock indices, including the S&P 500, Dow Jones Industrial Average, and NASDAQ.

Table titled 'AUSTRALIA (May 1/Asst)' and 'NORTH AMERICA' listing active stocks and their performance metrics, including prices and volume.

Vertical text on the left side of the bottom section, containing additional financial news and market commentary.

4 pm close May 1

NEW YORK STOCK EXCHANGE COMPOSITE PRICES

Main table containing stock prices, organized into columns with headers like 'NEW YORK STOCK EXCHANGE COMPOSITE PRICES'. Includes sub-sections for 'NEW YORK STOCK EXCHANGE', 'NASDAQ', and 'AMERICAN STOCK EXCHANGE'. Each entry lists a stock symbol, price, and change.

Market Dynamics advertisement for Hewlett-Packard. Text: 'If the business decisions are yours, the computer system should be ours. http://www.hp.com/go/computing'.

Continued on next page

NYSE COMPOSITE PRICES

Table of NYSE Composite Prices with columns for stock symbols, prices, and changes. Includes sub-sections for -V-, -W-, -U-, -T-, and -R-.

NASDAQ NATIONAL MARKET

Table of NASDAQ National Market prices for various technology and financial stocks.

AMEX COMPOSITE PRICES

Table of AMEX Composite Prices for various stocks listed on the American Stock Exchange.

Switzerland advertisement featuring the text 'Have your FT hand delivered in Switzerland' and 'Financial Times. World Business Newspaper.'

NASDAQ NATIONAL MARKET

Continuation of NASDAQ National Market prices, including sub-sections for -L-, -S-, -M-, -F-, -E-, -G-, -N-, -T-, -O-, -P-, -Q-, -J-, -D-, and -K-.

AMERICA

Technology stocks push Nasdaq forward

Wall Street

Technology shares in the Nasdaq composite continued their upward streak in mid-session trading yesterday, while other sectors posted more modest gains as the bond market strengthened, writes Lisa Brunster in New York.

result to 1.6% and NetComm On-Line Communication Services gained 4% or 13 per cent at 404.

With most of the Continent's markets closed for the May Day holiday, attention moved to AMSTERDAM, where the market nudged to yet another record high as dollar strength supported equities.

EUROPE

Dutch shares higher

The AEX index rose 1.12 to 555.72, and also struck an intraday high of 558.94 before profit-taking took hold.

ASIA PACIFIC

Nikkei declines below 22,000

Tokyo

Uncertainty over the course of the yen weighed on investor sentiment, and the Nikkei average declined 1 per cent, falling below the 22,000 level for the first time in seven trading days, writes Emiko Terazono in Tokyo.

Motor slipping Y10 to Y2,380 and Nissan Motor declining Y19 to Y855.

HONG KONG was moderately lower as investors took profits following the market's gain of more than 200 points earlier in the week.

The H share index of 18 mainland China companies surged 46.65 or 5.6 per cent to 872.33.

EMERGING MARKETS: IFC WEEKLY INVESTABLE PRICE INDICES

Table with columns for Market, No. of stocks, Dollar terms, Apr. 26 1996, % Change over week, % Change on Dec '95, Local currency terms, Apr. 26 1996, % Change over week, % Change on Dec '95.

FT-SE Actuaries Share Indices

Table with columns for May 1, Hourly changes, Open, 10.30, 11.00, 12.00, 13.00, 14.00, 15.00, Close.

FT/S&P ACTUARIES WORLD INDICES

The FT/S&P Actuarial World Indices are owned by FT-SE International Limited, Goldman, Sachs & Co. and Standard & Poor's.

Large table with columns for NATIONAL AND REGIONAL MARKETS, US Dollar Index, and various regional indices like Australia, Canada, France, etc.

MONTHLY AVERAGES OF STOCK INDICES

Table with columns for Index, April, March, February, January.

Jersey, C.I. advertisement for The Financial Times featuring a survey on Wednesday, May 22.

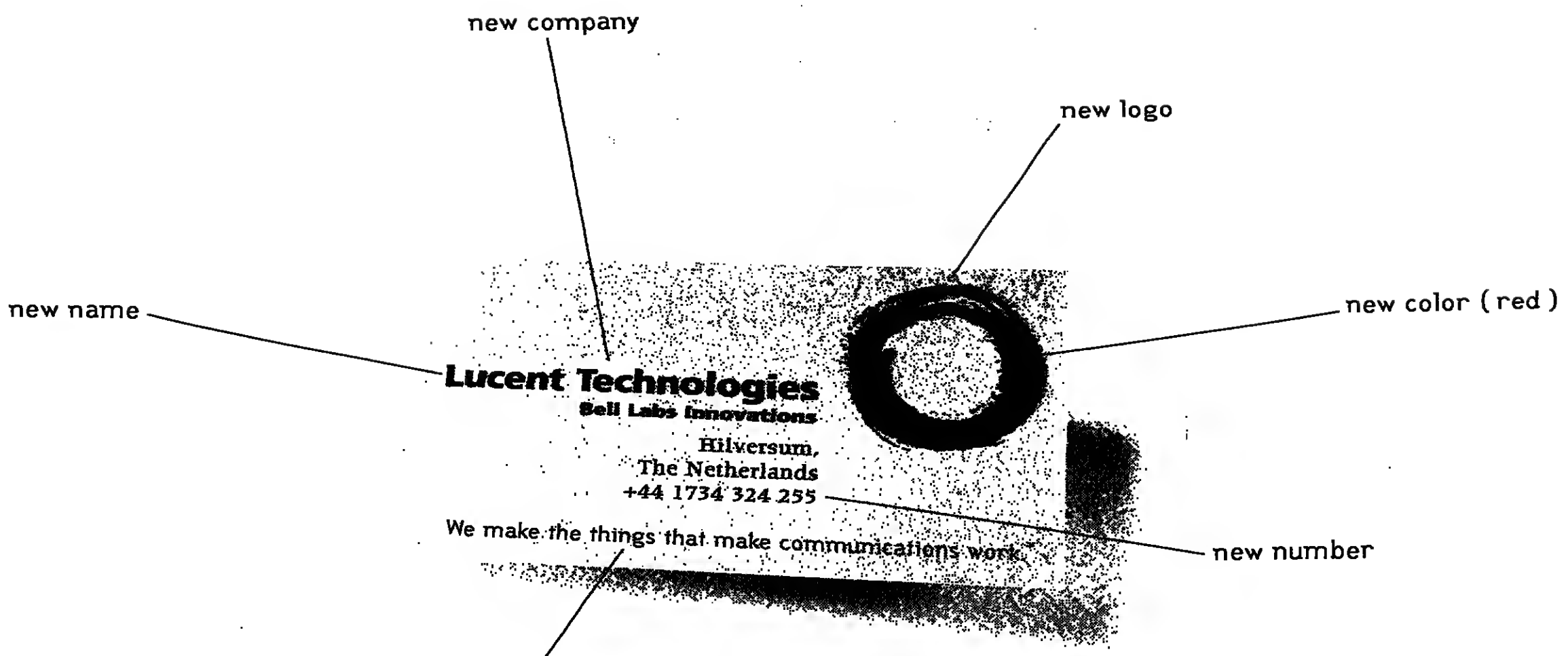
The United Mexican States Collateralized Floating Rate Bonds Due 2019 advertisement.

The United Mexican States Collateralized Floating Rate Bonds Due 2019 advertisement.

The Leading Edge in Asia Pacific advertisement for BSES Limited, featuring an offering of 8,680,550 Global Depository Receipts.

Handwritten scribble at the bottom of the page.

1550



(former systems and technology businesses of AT&T, plus Bell Labs, with 125 years experience in making the things that make communications work)

ms

TV SMART CARDS

The Sky algorithm that did not add up

An FT investigation by William Lewis raises questions over tax and management control within News group

For Professor Adi Shamir, one of Israel's foremost mathematicians, it was the breakthrough he had long worked for.

By 1980 he had, with others, developed a mathematical process, the Flat-Shamir algorithm, which could be used in encryption systems to protect data.

The Weizmann Institute of Science, the academic institution in Israel where Prof Shamir worked, was keen to exploit the technology commercially through its

company, Yeda Research and Development.

At first it was thought the encryption technology would be used only for bank transactions, information distribution and other security applications. But it became clear that it had another lucrative application - the restriction of access to satellite television broadcasts and pay television.

The success of the UK satellite broadcaster Sky TV - now 40 per cent owned by Mr Rupert Murdoch's News

Corporation and called BSkyB - is based on Prof Shamir's system, known as VideoCrypt.

Smart cards are a vital part of News group's business. The encryption technology used by Sky is also used by Star, News's Asian digital pay television venture, as well as in several other TV ventures.

More than 3m UK homes have satellite dishes and smart cards which enable them to "unlock" channels they have paid for. Periodically a new set of cards is sent

to subscribers in an attempt to beat off the threat of piracy.

In the UK, most satellite subscription services use the News group-owned VideoCrypt system. Cable companies argue that BSkyB's dominance of the VideoCrypt technology has become a gold mine.

The technology is also said to be vital to Mr Murdoch's plans to expand News group's TV interests worldwide. Analysts have pointed out how smart cards would enable TV programmes to be vetted ahead

of broadcast in countries such as China, where News group hopes to expand.

Alongside its evident success, however, the exploitation by others of Prof Shamir's algorithm has led to allegations by the News Corp group of fraud and a long-running conspiracy. The News group of companies is involved in several legal disputes, including one in the High Court in London.

Documents relating to the disputes, together with numerous interviews, have

enabled the Financial Times to piece together the short but turbulent life of News Datacom, the conduit for smart cards from News group to BSkyB and others.

News Datacom's history has involved offshore companies, disguised payments to executives, private investigators and secret telephone recordings. The findings raise serious tax questions as well as questions about internal management control within News group over several years.

News group says card sharps cost it £19m

News International, the main UK subsidiary of the News Corp group, claims that it has lost more than £19m as the result of a long-running "conspiracy" involving suppliers of BSkyB's satellite television smart cards, former employees and one of its own ex-directors.

The allegations

Details of the allegations have emerged in an action started in February in the High Court in London by four News group subsidiaries, including News Datacom, which arranges for the supply of smart cards on behalf of the group.

The losses claimed by News Datacom as a result of the "conspiracy" amount to £19,122,380, according to Mr Arthur Siskind, News Corp's general counsel.

News group companies claim that "the price paid by News Datacom for smart cards has been artificially inflated" as a result of a long-running conspiracy between Mr Michael Clinger, a former director of a News group subsidiary, Mr Meir Matatyahu, a former employee of News group, Mr Bharat Kumar Marya, a businessman, and several companies associated with him called the Marya companies.

They also allege that Mr Marya and the Marya companies received excessive profits, secret commissions have been received by Mr Clinger and Mr Matatyahu, and NDSP (News Data Security Products which traded as News Datacom) and News Datacom Ltd (the News group company registered in the UK which took over NDSP's business in 1992) have been prevented from putting in place any alternative source of supply of smart cards.

Mr Ian Rosenblatt, partner of Rosenblatt solicitors representing most of the so-called Marya companies, said: "There are questionable motives for the litigation. We are defending it vigorously. Obviously any conspiracy is denied".

Management issues
While News group hopes its High Court action will enable it to recoup its alleged losses from overcharging, the claim has led it to disclose embarrassing details of how News Datacom was managed over a number of years.

Former directors of News Datacom who were responsible for the company during different periods in which the alleged fraud took place, include Mr Richard Searby, former chairman of News Corp, Mr Peter Steinhilber, a director of News International, and Mr Gus Fischer, who resigned as a director of News International in 1995.

Between 1988-92 NDSP was 60 per cent owned by News group but is now a wholly owned subsidiary of News International.

An FT investigation has shown how top News group executives oversaw a series of

management decisions which left it wholly reliant on one group of suppliers for a crucial element of its TV interests.

News group claims that its managers' attempts were largely thwarted by the conspiracy. It admits that attempts to obtain a second source of supply failed and that it was forced to suspend those attempts when its smart cards became hit by pirates' imitations and it needed the Marya companies' help.

Issues of internal control are also raised by News group's allegation that Mr Bruce Hundertmark, the man it entrusted to help form and run NDSP and later appointed a News International director, had a secret deal with IDG, a minority shareholder and a company in which Mr Clinger has a beneficial interest, in relation to its 20 per cent holding in NDSP.

Sky had engaged Mr Bruce Hundertmark as a consultant in 1987 and he suggested News group should develop its own smart card system to restrict access solely to subscribers.

The beginning
Sky Television was Mr Rupert Murdoch's great gamble in the late 1980s. To win subscribers, the satellite channel would have to show popular programmes, particularly films. But Hollywood distributors were only prepared to do business if Sky could control access to its broadcasts.

On News group's behalf, Mr Hundertmark negotiated a joint venture with Prof Adi Shamir, a pioneer of encryption technology, and Yeda Research and Development, the company through which Weizmann Institute of Science, Prof Shamir's employer, commercially exploits new technology.

Yeda granted News an exclusive licence to Prof Shamir's algorithm in return for a combined 30 per cent interest in a joint venture, News Data Security Products. IDG took a 20 per cent stake. Just months before the deal, the US Securities and Exchange Commission, the watchdog of the US financial community, had taken action against Mr Clinger relating to his actions while at Endo-Lase, a bankrupt US medical equipment company.

While NDSP could handle the conceptual side of the VideoCrypt encryption system, it had to work with another company, Thomson Consumer Electronics of France, to provide necessary decoder hardware.

The first batches of smart cards were bought from Gemplus Card, which was one of only a small number of smart card producers. News group claims that "Mr Hundertmark therefore suggested that NDSP should set up its own factory to manufacture them."

In a joint venture between NDSP and Gemplus in Livingston, Scotland, a factory was established a few hundred yards from Sky's subscriber

management centre. The joint venture was called News Gem, a Hong Kong company registered in Scotland as an overseas company.

From late 1989 until June 1991, News Gem used the plastic cards and module assembly supplied by Gemplus, and assembled and tested the smart cards. News group claims that its intention was for News Gem to manufacture the microchip and microchip which were inserted in the module assembly, and thus produce complete smart cards.

Hundertmark
In January 1989, with News group apparently unaware of Mr Hundertmark's alleged "secret arrangement" with Mr Clinger, Mr Hundertmark became an employee of News International (NI), and one month later was appointed an executive director.

Within a year, however, Mr Hundertmark began to suffer health problems and spent more time in Australia, according to Mr Peter Steinhilber, NI's company secretary. It was decided that Mr Hundertmark should be asked to leave, he states, and on May 18 1990, he resigned as a director of NI and NDSP.

Only after his departure, News group says, did it come to light that between March and April 1990 Mr Hundertmark had entered into five distribution contracts, including one with Catalist - an alleged member of the conspiracy - on behalf of NDSP, allegedly contrary to what had been agreed by the NDSP board.

News group claims that once NDSP found out about the contracts, steps were taken to renegotiate their terms.

Responsibility for renegotiating with Catalist was given to Mr Clinger, and a new agreement was entered into in August 1990. News group claims it did not at that stage know that 60 per cent of the shares in Catalist were beneficially owned by Mr Clinger.

The reliance of NDSP on the Marya companies increased further at about the end of 1990 when News group contracted PML, connected with Mr Marya, to start supplying smart cards to NDSP.

Livingston
Within months, News group claims, the Marya companies had turned this into an exclusive supply arrangement. One of the main reasons was the decision taken by the NDSP board in June 1991 to cease assembly of smart cards at the Livingston factory, which would have enabled the News group to produce complete smart cards. Instead programming of the cards was to be carried out at the NDSP facility in Maidenhead, Berkshire.

In its legal action News group blames Mr Clinger, Mr Siskind claims that other NDSP directors were swayed by the arguments Mr Clinger

put forward.

News group now claims that Mr Clinger's ulterior motive in making this argument was his alleged beneficial interest, through a web of offshore companies, in 60 per cent of PML, hence his desire to put PML, a Marya company, in place as a key source of smart cards suppliers.

News group alleges that PML, an offshore company incorporated in Liberia operating from Jersey and with bank accounts in Guernsey, has been used as a vehicle for the receipt of payments from News Datacom.

Money received by PML has allegedly been disbursed to four companies, two controlled by Mr Clinger and two by Mr Marya.

Such was the force of Mr Clinger's argument, apparently, that it was accepted by NDSP and the News group.

Nevertheless, just months later - by Autumn 1991 - News group states that it had decided it would have to replace Mr Clinger if the business was to survive. He had become extremely difficult to work with and News group states that it had also decided to buy out the 40 per cent shares in NDSP it did not already hold.

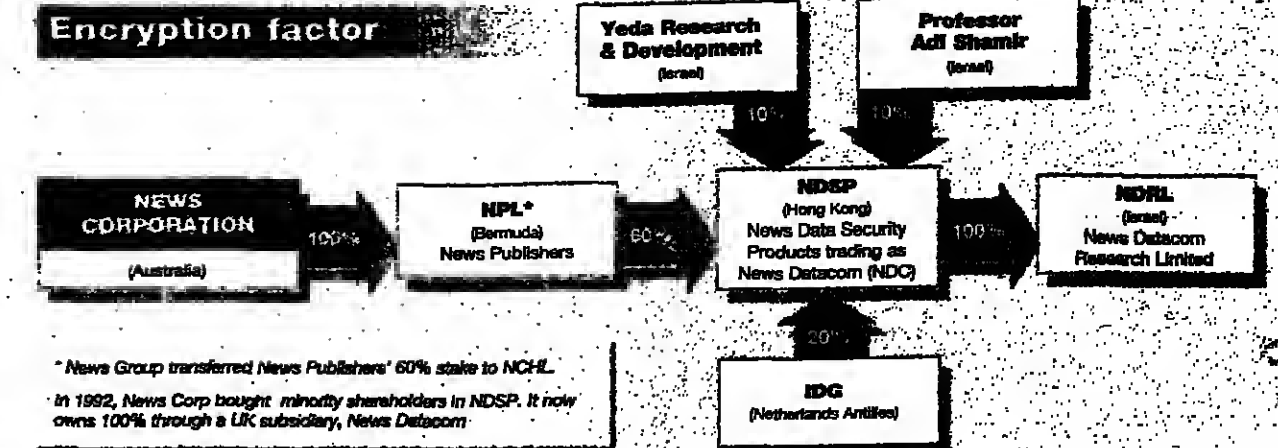
The buy-out
Due diligence was undertaken. News group says, but it failed to uncover the alleged conspiracy.

News group admits that the gathering of information was made difficult because there was no central record keeping function. It also states that the responses given by minority shareholders, in particular Mr Clinger, to requests for information were inadequate and incomplete.

Despite these problems, in May 1992 the buy-out agreement was signed and in July it was completed. News group paid \$13.2m to buy out the 40% minority shareholders in NDSP, and News Datacom Ltd (NDC), a UK company and News group subsidiary, then took over the business.

News group states that \$3m was paid to IDG, the Netherlands Antilles company, for its shares in NDSP, plus a further \$60,000 under a "consultancy and fair competition agreement". It was also agreed that further funds would be paid to IDG over a five-year period based on the revenue received by News group. Warranties were obtained from Mr Clinger as part of the deal. News group states Mr Hundertmark is now claiming that he is entitled to part of IDG's pay out.

Conspiracy
The 1992 buy-out and departure of Mr Clinger did nothing to stop the alleged conspiracy and the dependence of NDSP and NDC on the Marya companies for the supply of smart cards. News group claims NDSP subsequently became locked into a relationship with the Marya companies whereby in



THE COMPANIES

News Corporation
Rupert Murdoch's main quoted company (Australia)

News International (NI)
Owner of Times Newspapers, etc. (UK). Parent company is News Corporation

News Publishers (NPL)
Part of the News Corp group. Held News group's 60% stake in NDSP, 1988-91. (Bermuda)

News Cayman Holdings (NCHL)
"Bought" NPL's 60% stake in NDSP ahead of the \$13.2m buy-out by News group of other 40% minority shareholders in July 1992. Part of the News Corp group

News Data Security Products (NDSP)
Held 100% of NDSP, 1988-92. (Hong Kong). At centre of suit by News Corp against former shareholders and others. Incorporated as Bunge Ltd in Hong Kong in 1987 to act as the "written company" to develop and exploit encryption technology developed by Professor Adi Shamir of the Weizmann Institute in Israel.

News Datacom Research Ltd (NDRL)
Carried out research and development, and, according to News group, was to be a joint venture with IDG. Held 20% of NDSP, 1988-92. (Netherlands Antilles)

News Gem Smartboard International
Joint venture (Hong Kong) between NDSP and Gemplus, France. Set up in 1987 to produce and assemble encryption technology developed by Professor Adi Shamir of the Weizmann Institute in Israel.

NDC took it over in 1992, moved its headquarters to Jersey and carried out research and development, and, according to News group, was to be a joint venture with IDG.

US company associated with Shamir Marya, NDSP made joint venture with Catalist in 1987 relating to the manufacture of smart cards in the US and Canada and, according to News group, was to be a joint venture with IDG.

NDSP's 60% stake in NDSP, 1988-91. (Bermuda)

Co-defendant in News group action.

Co-defendant in News group action.

Co-defendant in News group action.

Co-defendant in News group action.

THE PEOPLE

Adi Shamir
Leading Israeli tax expert. In October 1995 the Foreign Office of NDSP was "merely" a vehicle and the actual management and control of NDSP were based in Israel.

Michael Clinger
Former chief financial officer of NDSP and NDRL, 1988-92. Co-defendant in News group suit. "Controlled and directed" IDG, according to News group.

Daniel Doo
NDSP company secretary. Received instructions from Bruce Hundertmark about payment of directors' fees to foreign bank accounts.

Gus Fischer
Former managing director of News International.

Meir Matatyahu
Former operations and logistics manager for NDSP. Held 40% of NDSP shares. NDSP's former chief financial officer.

Richard Searby
Former chairman of News Corp, founding director of NDSP.

Prof Adi Shamir
Professor of Mathematics at Weizmann Institute, co-developer of Flat-Shamir algorithm, basis of encryption technology used in Sky TV.

Michael Clinger
Former chief financial officer of NDSP and NDRL. He managed the buy-out of NDSP from its minority shareholders. He was also involved in the alleged conspiracy to divert NDSP's funds to his own companies.

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Professor of Mathematics at Weizmann Institute, co-developer of Flat-Shamir algorithm, basis of encryption technology used in Sky TV.

Dark tax affairs in a corner of Rupert Murdoch's empire

Internal documents from News Data Security Products, a Hong Kong-registered company which oversaw the development and production of the smart card used to prevent the piracy of satellite broadcasts, give a rare glimpse into the tax affairs of an important corner of Mr Rupert Murdoch's corporate empire.

The level of tax paid by News Corporation, the group's parent company, and its subsidiaries, has long been a controversial issue. The NDSP documents seen by the FT throw some light on this.

Documents show how the company's operations and accounts were structured to minimise the revenues reported to tax authorities in Israel, where its wholly-owned subsidiary News Datacom Research (NDRL), was based and carried out its business, and also in the UK where the company has also carried

out activities.

The structure led to NDSP, in which News group held a 60 per cent stake, being liable for tax in Hong Kong, where it was registered. NDSP traded as News Datacom and that became its official name after News group took 100 per cent ownership in 1988 through a UK registered company called News Datacom Ltd.

The documents also show how remuneration to NDSP executives was paid, out of Hong Kong, to a variety of foreign bank accounts. Executives had some of their remuneration paid as consultancy fees, but booked as directors' fees in the accounts.

NDSP bought R&D services from NDRL on a so-called "cost-plus" basis, but in a letter written in July 1991, Mr Leo Kreiger, the then chief financial officer of NDSP, says: "When NDSP and NDRL were

established, it was recognised that certain steps were required in order to distance NDSP (NDSP) revenue from Israeli income tax."

Mr Kreiger said the method used for recording "projects" and "costs" did not have any significance other than for Israeli income tax purposes. "They are primarily developed to allow for appropriate timing of reporting revenue to the Israeli income tax authorities to result in negligible profit."

Mr Kreiger says "these are tax avoiding" (as opposed to tax evading) devices and that "Arthur Andersen (auditor of News Corp) does not even review these documents".

News group has agreed to pay Mr Kreiger, who last year was questioned by the Israeli Revenue about his personal tax affairs, in return for his "assistance in analysing and providing information" in relation to its High Court action.

In another memo dated February 1988, Mr Kreiger is said to have warned Herzog, Fox and Neeman, News Datacom's lawyers in Tel Aviv, that a former company employee who knew of the "company's tax planning" could "approach the tax authorities in Israel with this information."

Herzog's note of the meeting states that at the financial year end the employee, known as Yagel, had to retroactively determine how much value was to be attributed to each project done during the past year to achieve economic results as close as possible to the objectives of almost no profits for NDRL.

Other internal NDSP documents raise questions about the tax jurisdiction in which management and control of the company took place, crucial in determining where it should be liable for tax.

Mr Kreiger told Mr Gus Fischer, then a director of News International, whose parent company is News Corp, that "management and control was not exercised from the UK" in discussions about the tax status of Mr Bruce Hundertmark, the former director of News International, facing action in the High Court.

Mr Kreiger, in the memo dated June 1990, discussed how the location of senior executives of News Datacom residing in the UK "and being responsible for company sales activities", could mean that "NDC [NDSP] would be exposed to Inland Revenue claims of NDC [NDSP] trading from and in the UK".

Mr Avi Alter, a leading tax expert in Israel, concluded in a report dated October 1986 that the "foreign control" of NDSP was "merely a facade, and the actual management and control of NDSP were based in Israel".

With Mr Kreiger stating that management and control was not in the UK, Arthur Andersen stating, in another document, that management was not in Hong Kong, Mr Alter says: "Since management must be centred somewhere... the 'nerve centre' of NDSP must be deemed to be in Israel."

Mr Alter, who as News group points out does not state who commissioned his report, concludes that NDSP is liable for Israeli tax on its income from all of its activities during the period in question.

News group, through Herzog, strongly denies Mr Alter's conclusion and says management and control was outside of Israel and it was not liable for tax there.

Herzog says "the description of the facts is clearly slanted against NDSP" and "it is highly prejudicial to NDSP's interests". The response also says that NDSP was estab-

lished in Hong Kong for "valid business considerations". Throughout the relevant period NDSP had "accumulated losses and the whole question of its Israeli tax liability is therefore academic".

Serious questions also arise over the recording of payments to directors of NDSP.

A letter written by Mr Bruce Hundertmark, then a director of NDSP and also of News International, to Mr Daniel Doo, NDSP's secretary in Hong Kong, dated August 16 1988, states: "As you are aware from the last NDSP board meeting in Hong Kong, there was unanimous agreement to pay certain individuals consultancy fees as part of their remuneration." He told Mr Doo NDSP directors had agreed to "book these payments as directors' fees and not as consultancy fees, therefore there should be no additional record of these payments".

Handwritten note: 20/05/96

TECHNOLOGY

Getting a good hearing

Take the kind of sound mixer found in recording studios, digitalise the operation, put it on a chip measuring less than half a centimetre square and you will have the making of a good hearing aid.

This, roughly speaking, is what two rival Danish hearing aid manufacturers, Oticon and Widex, have done. A third Danish company, Danavox, is expected to follow in their footsteps shortly.

Oticon announced last autumn that it would be launching a 4.5g behind-the-ear digitalised hearing aid in the spring of 1996. Then last week Widex presented an in-the-ear device weighing just 1.5g, including a battery with a working life of 165 hours. Jan Topholm, Widex chairman, says the company expects to produce between 50,000 and 100,000 of the new aids within the first year. Whichever device is chosen by users, the Danish companies have stolen a march on their international competitors.

The Widex aid, called Sense, is based on a proprietary chip developed by the company in co-operation with an undisclosed international chip manufacturer. The chip samples sound received at the rate of 1m samples per second. It processes and redistributes the sound to the wearer of the aid at a rate of 32,000 20-bit "words" a second. Digitalisation means that the device can be programmed, rather like the recording studio sound-mixer, to suppress background noise and to recognise and enhance the speech of the person the wearer is talking with.

Widex claims that it has been able to eliminate whistling, which is caused by an acoustic feedback loop (the microphone picks up the sound being broadcast by the hearing aid and rebroadcasts it). The aid itself measures hearing loss and programs automatically for optimal compensation, so the wearer does not have to adjust the device.

Hilary Barnes



ROBOTICS AT WORK

As far as robots are concerned, icing a cake should be as easy as sealing a car windscreen. Both jobs require them to squirt a viscous liquid in complicated patterns. But while robots are familiar tools to carmakers, they are near-strangers to food processors. There may be fewer than 20 sophisticated examples in the UK and most are used in packaging and warehousing rather than food preparation, according to the British Robot Association. Use on the Continent is wider but still limited.

Two crucial factors have inhibited robot penetration of food preparation, says Peter Wallin, head of food engineering and manufacture at Leatherhead Food Research Association near London. First, people are reluctant to invest, he says. Food manufacturers survive on notoriously thin margins and have little difficulty hiring unskilled staff at pay rates as low as £100 a week.

Second, many food manufacturers "lack a vision for manufacture and how it relates to profitability", says Wallin. They are focused instead on developing their rapidly changing products and markets. They also tend to be weak on technology because they have cut their staffs or had their fingers burnt on high-tech projects in the past.

To explore these issues, Leatherhead and the Ministry of Agriculture, Fisheries and Food hope to attract 100 delegates to a one-day seminar on food robotics at Leatherhead on June 7.

"It is difficult to find food people who openly admit they have got a robot and that it works. They want to keep it a secret," says Bob Lloyd, chairman of the BRA and project manager of the food division of Intelligent Systems, a robot and systems integrator.

Those who have made them work keep very quiet because of the potentially huge productivity gains. In the food industry a small manufacturer can rapidly gear up to be a big one if it can devise an innovative or cost-effective product. Among big processors, Unilever, Nestlé and Mars are widely rumoured to be keen developers of robots but so competitive an issue is it that they barely acknowledge their interest in the machines.

Big breakthroughs have tended to come in highly concentrated, big and competitive sectors, typically where they dominate a nation's agribusiness. Thus robots butcher sheep in New Zealand, slice pork in Denmark, fillet fish in Iceland, pack chocolates in Switzerland and make schmitzels in Germany.

The British must be a nation of cake and biscuit eaters because that



Slice of the action: robots are rarely sighted in food and drink production

Food processors are coy about automation, says Roderick Oram

Secret ingredient

is one area where the cost-benefit equation of robots is beginning to show enticing results as equipment improves and experience is gained.

"We are probably about a year away from finding the right cost solution," says Paul Kitchener, operations director of McVitie's, the United Biscuits subsidiary. His goal is to develop a robotic head with visual recognition powers that could be used widely across the group. McVitie's already has one packaging cheese biscuits and is about to install a second to delicately pack custard products.

Similarly, Fox's, Northern Foods' biscuit subsidiary, is using simple robots without image definition to

help pack assortments of biscuits.

But it is still people that insert the trickier items into the tins and do the final inspection. Gary Glover, general manager of Fox's Kirkham factory, readily acknowledges this use is closer to mechanical handling than true robotics but he is seeking more sophisticated applications. "We are all keen but with an eye on the commercial aspects."

Robots are making inroads in more technical areas of food preparation. Affordable Automation of Manchester used CRS robots from Canada, for example, to automate nuclear magnetic resonance spectroscopy testing of food samples for

a leading processor. It also offers a CRS robot skilled in icing but so far has no UK takers, says Tony Evans, managing director.

"The payback is coming down to two or three years," says David Bennett, manager of the food sector for ABB Flexible Automation, a subsidiary of the Swedish-Swiss group which began its food thrust less than three years ago. Prices can start at about £100,000 for a single robot on a single packaging line. ABB stresses that robots have a high residual value. They come with three years' free maintenance, have a long life and users can easily move them to other tasks if their needs change.

ABB and other robot makers also stress operational benefits such as the control and information that robots bring to the use of ingredients, particularly seasonal ones, in food processing.

The tough technological challenges lie ahead, however. The food industry should be ideal for robots. Many tasks in food preparation and packaging are repetitive but the orders can be small and intricate. One supermarket might specify, for example, that six slices of pepperoni are arranged in a circle on its own-label chilled pizzas while another calls for eight slices in lines.

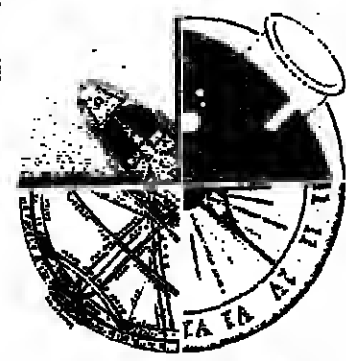
A chilled pizza line today might have highly automated dough making and baking and dispensing of cheese and tomato pastes, but downstream scores of people place the toppings. Similarly, hundreds of thousands of fresh sandwiches are made in factories each day but by hand.

Fresh foods present particular challenges with health and safety regulations working largely in robots' favour. Pizzas and sandwiches, for example, would have a longer shelf life if they were made in a near freezing, deoxygenated atmosphere. But they can also replace humans in less hostile but still unpleasant environments such as a cold abattoir. An occupational hazard for butchers is repetitive stress injury caused by wielding knives in low temperatures.

But these are the very applications where robots still need a lot of adaptation from their car industry forebears. Some already ice a cake in 15 seconds or slice chicken breasts in moments but more speed and dexterity is needed. Moreover, strict hygiene standards require easy cleaning of, say, stainless steel robots in a pristine environment far removed from a car line.

Until robot makers and systems integrators find cost-effective solutions to these difficult tasks, food processors are likely to remain heavily dependent on cheap labour.

Worth Watching · Vanessa Houlder



Robots lend a hand in prostate surgery

A robotic device designed to help surgeons carry out prostate operations is likely to begin clinical trials in the coming months.

Prostate operations involve the painstaking paring down of tissue over a period of up to 90 minutes. By making the task less taxing, it is possible that surgeons could perform more operations during the day.

The robotic device could make the operation less tiring because the surgical instrument would be manipulated using a hand-held joystick. Future developments could include an ultrasound imaging system to guide the surgeon on how deeply to cut.

The system was developed by Dryburn Hospital in Durham and Labman Automation in Stokesley and demonstrated at last week's Institute of Physics conference. Institute of Physics: UK, tel (0)171 470 4800; fax (0)171 470 4848.

Daimler's stripey defect detector

Daimler-Benz, the German carmaker, has improved its ability to detect defects in car parts, by using an optical technique that involves shining a pattern of stripes on to the metal. The pattern, which is monitored with a video camera, will appear distorted even if the surface is only a few hundredths of a millimetre out of line. Even smaller rough spots can be discovered by using a computer.

Daimler-Benz: Germany, tel 7111793029; fax 7111794365.

Copyright on electronic pictures

As electronic distribution becomes more common, picture libraries and news agencies have

a growing need to protect their copyright on still and moving pictures.

CRU, Thorn EMI's former central research laboratories, has found a method of introducing a "watermark" into the image. Its technique of "visual masking" involves introducing a unique code, known as a Visually Embedded Code, into the image in such a way that it cannot be removed from even the smallest sample of the image.

CRU: UK, tel (0)181 849 6861; fax (0)181 849 6862.

PCs built with recyclable casing

The difficulty and cost of disposing of obsolete computer equipment is rising as the normal "life cycle" of business personal computers gets shorter, writes Louise Kehoe.

To cut disposal costs and help safeguard the environment, Dell Computer has introduced a PC chassis made entirely of recyclable materials. It is made of a durable plastic that is free of coatings or fillers that normally prevent recycling. The structure is supported with preplated cold rolled steel, which can be separated quickly with the twist of a screwdriver. The plastic is identified and marked in accordance with international ISO standards.

Information on Dell's World Wide Web site, <http://www.dell.com>

Satellites at risk from the sun

The UK's Defence Evaluation and Research Agency has found "conclusive evidence" that many satellites are at risk from electrostatic discharges while in orbit. The researchers' aim is to find a way to protect future missions against these internal charging effects which can result in hugely expensive satellite failures.

Satellites could be particularly susceptible early next year when the 11-year solar cycle of activity on the sun's surface reaches a minimum. At this time, electrons penetrate thin coverings of the satellites and produce a dangerous build-up of charge. The researchers identified a microelectronics circuit that was especially susceptible to charge build-up.

DERA: UK, tel (0)1252 394627; fax (0)1252 394571.



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السنة من الالعب

ARTS

Cinema/Nigel Andrews

Dirty Dozen in Tarantino-land

If there were a "best title" Oscar, *Things To Do in Denver When You're Dead* would vanquish all opposition. Ascending the stage in spotless tuxedos, the makers would clasp the gold statue and thank the following. The city named Denver for conjuring by its very sound a pluperfect provincialism; the alliterative rhythm of "dead" and "Denver", suggesting interchangeable concepts; and the iambic trio of the whole phrase, which could come from Shakespeare via Chandler and Tarantino.

The film is as good as its name. First-time feature director Gary Fleder steers a dream cast through dream dialogue written by fellow debutant Scott Rosenberg, while a crazed visual elegance transforms the plot about five semi-retired hoodlums bungling - fatally - a last simple assignment.

Our hero is gangster turned "afterlife advice" manager Andy Garcia, who video-recording people's counsel to their surviving loved ones. When he takes a day off work to help crippled crime boss Christopher Walken, it proves to be less a day, more a lifetime. Walken's retarded child-molesting brother was about to be saved by the love of a good woman when the girl fell for a passing playboy. Frighten the playboy off, hisses Walken. And he glowers through corpse-like cheeks with the little energy left from mouth-steering his wheelchair.

You may guess what happens. Rainy night road; blinding lights; boy pulled up by Garcia's cronies dressed as fake patrolmen. Then the unexpected flash of knife, the unplanned gunshot. Exit in all directions the cronies. Since these include a nervous porn film projector (Christopher Lloyd), an overweight black pest controller (Bill Nunn), a trailer-dwelling down-and-out

(William Forsyth) and a movie-working ex-boxer (Treat Williams) who uses dead bodies as punchbags, you understand that they will follow any signpost that says "Trouble and disaster". Disbelief is suspended early on. We spend a mere pedantic minute or so wondering why a well-oiled smoothie like Garcia, who has applied to his hair all the unguent he does not use in his speeches, would even think of employing these brain-deficient henchpersons. Or why he goes back to Walken after the botched job, as if to tickle the

THINGS TO DO IN DENVER WHEN YOU'RE DEAD
Gary Fleder

MARY REILLY
Stephen Frears

HACKERS
Iain Softley

BARB WIRE
David Hogan

Both actors are back, she in a bosomy vignette as a Victorian brookkeeper, he as Dr Jekyll and Mr Hyde. The source novel is Valerie Martin's re-telling of Stevenson's horror yarn from the viewpoint of Jekyll's servant maid, played by Julia Roberts. Ergo, it is *Wide Sargasso Sea* or *Rosencrantz and Guildenstern Are Dead* by another session of Virtual Plagiarism.

The through-the-keyhole approach results in a visual perspective almost as cramped and frustrating. Cinematographer Philippe Rousselet's low lighting and designer Stuart Craig's doom-grey interiors stifle what small life there in the two main performances. We hesitate to say "three" since Malkovich's monster is distinguished from his medico by little save long hair and a whinier snarl.

Roberts, meanwhile, seems like a girl lost without her hoop in an Edward Gorey horror strip. The fey, etiolated performance is unhelped by an accent that moves around the British Isles like a backpacker searching for a vacant B-and-B. The film's crypto-sexual psychopathology is just as vagrant. We begin with Freud: a thrashing eel brought to the kitchen and skinned before our eyes. We pass through R.D. Laing: "I am the bandit, he is merely the cave in which I shelter," says Jekyll of Hyde. And we end with *Alvin* as - but no, if you sit through this movie you might as well have the slim reward of its shock-horror climax.

One of the things not to do in Denver, even if dead, is see *Mary Reilly*. Director Stephen Frears and screenwriter Christopher Hampton may have viewed this project as "Dangerous Liaisons Two"; another study in *outré* eroticism from the team that brought us Glenn Close and John Malkovich as the LaClos-based fancy dress sex-adventurers.

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As good as its name: Andy Garcia and Treat Williams in "Things To Do in Denver When You're Dead"

Backers is about the exciting times you can have if you are young and insomniac and own a computer. Every time you draw back your bedroom curtains after a hard night's surfing you will be set upon by the Internet's answer to Interpol: at least according to this rock-scored, lollipop-coloured thriller directed by Iain Softley. The said cops will rush out with guns and gas and haul you off for a hard day's questioning.

Why? Because you have just tapped into a millionaire's Swiss bank account and/or the secrets of the universe and/or the mimics of the story conference that produced this insanely brainwashing film. You have to warm to a

movie that has 11-year-olds committing major industrial sabotage and that never walks when it can run, leap, dance or rollerskate. You have to warm to it, although I am not sure you have actually to see it: at least until it becomes a CD-Rom and you can watch in the comfort of your own snug, police-surveilled bedroom.

Pamela Anderson Lee - the last name has been pinned on her for services to *Baywatch* and in recognition of her desire to change identity for a feature career - is an extraordinary presence in the sci-fi thriller *Barb Wire*. The eyes try to find a personality, but are hopelessly detained by the accoutrements. As with Dr Jekyll there are

Broadway comes to the Proms

The 1996 Proms, which open at the Royal Albert Hall on July 19 with a performance of Haydn's *The Creation*, have a new director in Nicholas Kenyon, the controller of Radio 3. But the formula of the most successful music festival in the world stays much the same: in Kenyon's words, "a combination of quality and popularity".

There are no great themes, but one of the under-currents running through the record number of 72 proms, all to be held this year at the Albert Hall, is creation and re-creation - composers looking back to their mentors. So there is Stravinsky re-interpreting Tchaikovsky; and Elgar, Bach. There is also a spread of "Te Deums", from Haydn, Bruckner (well featured this year), Dvorak and others.

Kenyon is taking a more liberal view of the Last Night junketings than his predecessor, John Drummond, who wanted a subdued, respectful audience. "I'm in favour of a spirit of genuine celebration", although in the first half there will be a London premiere for Paul Enders' "Concerto in Pieces".

In all there will be 25 new works performed at the Proms, including five BBC commissions. Kenyon is keen to present music that for some reason has been overlooked by the Proms, ranging from a Bach Mass to Stravinsky's "The Flood". Among other innovations will be the music of Duke Ellington; a late-night Prom of Broadway songs; and a linked series of chamber music concerts. Another novelty is a Schools Prom.

There are some interesting curiosities in the concert performances of opera, including the five act Italian version of Verdi's *Don Carlos* performed by the chorus and orchestra of Covent Garden under Bernard Haitink; a rare performance of Beethoven's *Leonora*, his precursor of *Fidelio*; and an even rarer revival of Kurt Weill's *The Silver Lake*.

Among the orchestras visiting the Proms this year are the Berlin Philharmonic under Claudio Abbado; the Chicago Symphony with both Solti and Barenboim and the New York Philharmonic with Kurt Masur.

There will be plenty of early music, Indian music, and lots of Spanish music to celebrate Falla, who died 50 years ago, and Gerhard, who was born 100 years ago. Ticket prices are the same, or only marginally higher, than a year ago, and a season ticket for all Proms at £130 (standing in the arena) must remain one of the best bargains in the arts.

Amid all the concern that classical music is in decline audiences for the Proms remain surprisingly healthy: 81 per cent of capacity last year, a year which was dedicated to new music. The Proms remain the pride and joy of Kenyon and the BBC.

Antony Thorncroft

Goya shortchanged in Madrid

In a rare one-man performance, it will be death on a Goya afternoon today in Madrid's halling. José Miguel Arroyo, a serious young man and a gifted matador who fights under the name of Joselito, is scheduled to kill all six bulls selected for the corrida and he will dress "suft of lights" worn by modern-day bull-fighters but in the loose 18th-century costume that was the norm in Goya's day.

grandly called the *año de Goya* by the ministry of culture is an exhibition in the Prado that has been hailed by its organisers as the biggest ever Goya show. The exhibition would infuriate Goya and it has already been savaged by critics.

Writing in *El País*, the influential Madrid newspaper, Francisco Calvo Serrallier, a former Prado director, called the exhibition a "nullity" and loftily denounced a bare-faced commercial attempt to "exploit culture by tricking the public at Goya's expense".

Swindle is alleged because all of 130 of the 170 Goyas picture in the exhibition, including all the best pictures, already belong to the Prado where they are permanently hung and, indeed, often better bung than they are in the anniversary show. Arranging the exhibition has meant repositioning some canvases into areas of inferior lighting.

In an obvious sense the exhibition is a rip-off because, assembled as they are in the anniversary show, it now costs Pta1000

(£8) to see the Prado's Goyas whereas they can at normal times be viewed for Pta400, which is the museum's entry price. The Prado itself has in the meantime been woefully stripped off its Goya collection while the exhibition lasts.

The "nullity" charge is a serious one and critics have raised it on at least three levels. No attempt has been made to restore less than well preserved Goyas for the exhibition or to re-assess the authenticity of those that could be considered dubious; the exhibition includes only a handful of works from other museums and from private collections and none of them are judged to be "show stoppers"; and no attempt has been made to place Goya in any kind of context either by exhibiting his work with those of his contemporaries or by exploring his debts to earlier painters and his legacy to those that succeeded him.

The swindal truth is that the *año de Goya* is the product of last minute rush and improvisation. The decision to hold an exhibition at all in the Prado was taken a scarce six months before it was due to open. Given the extraordinarily tight time frame it is remarkable that the Prado managed to obtain any extra Goya paintings at all for the anniversary show.

Goya: the Prado Museum, Madrid, until June 2. International reservations may be made on 34-1-637 6200.

Theatre 'Mules' under threat

The "mules" who crop up in the news now are drug-couriers, needy people who agree to fly from some third-world country to a western capital with a load of cocaine or heroin.

The pay is dourish, compared with the profits that a successful trip will make for the real dealer; the risks are great, for the couriers usually carry the drugs not about their persons but in them (you cannot plead that you never knew they were there), and the penal sanctions are severe.

Winsome Pincock's new-ish play, *Mules*, at the Royal Court's studio theatre is about three such people, young Jamaican women. She "researched" it while resident in Holloway women's prison for the Clean Break Theatre Company (who put it on first), and elsewhere in the UK and in Jamaica. The result is interesting to watch, and disarmingly performed; but not, I think, a very good play.

Mules offers a central strand - two sisters from the Trenchtown ghetto are hired by a sophisticated ex-Jamaican lady to do "mule" duty, but things go badly in an exemplary way - and a surrounding collage of sub-plot with floating vignettes. In all this, the three black actresses play 12 roles of varying sizes. It is fun to bear their artful mimicking of different black accents (London posh, London East End, Jamaican, Nigerian).

But the central strand, being exemplary, is as predictable as any TV docu-drama; and Miller Pincock has sought to lighten it by foisting self-conscious, hyper-articulate dialogues and monologues upon her characters, along with some very woolly "feminist" morals.

In a novel, they might read well in third-person form (the novelist tells us what she thinks her characters must be thinking); as uttered on stage in *propria persona* they are

hard to believe, despite the players' valiant, inept efforts to give them live conviction.

By the end, one feels slightly better informed about the sad, containing situation that unreasoned western legislation has brought about (which a TV documentary could have achieved just as well), and tantalised by poetical flashes into the lives of the female third-world poor. Those distinct things do not coalesce here.

Instead, we seem to have two sub-plots of different kinds running in awkward alternation, to the theatrical detriment of both. All the cast - Abi Ebiola, Sheila Whitefield and Clare Perkins - have strong, communicative virtues; I think their director Roxana Silbert might have done much more to lubricate their stiff interplay.

David Murray

At the Royal Court Theatre Upstairs, to May 18.

INTERNATIONAL ARTS GUIDE

ANTWERP
CONCERT
De Singel Tel: 32-3-2483800
● La Petite Bande: with conductor/ violinist Sigiswald Kuijken and violinist Ryo Terakado perform works by Haydn and Mozart; 8pm; May 8

ATHENS
CONCERT
Athens Concert Hall
Tel: 30-1-7282333
● Athens State Orchestra: with conductor Dimitris Chorafas and pianist Aris Garoufalas perform works by Ravel, Rachmaninov and Mahler; 8.30pm; May 3

BARCELONA
EXHIBITION
Museu Picasso Tel: 34-3-3196310
● Futurist exhibition featuring works by the leaders by this movement. These were the artists who signed the first Manifesto: Marinetti (Futurist Manifesto, 1909) and Boccioni, Carrà, Russolo, Balla

and Severini (Manifesto of Futurist Painters, 1910). The exhibition is supplemented with works by Depero, Sironi and Soffici. The display includes some 60 paintings and 30 drawings, as well as letters, photographs and books; from May 8 to July 31

BERLIN
CONCERT
Konzerthaus Tel: 49-30-203090
● Vogler Quartet: perform works by Haydn, Ligeti and Smetana; 7.30pm; May 5
OPERA
Deutsche Oper Berlin
Tel: 49-30-3438401
● Lucia di Lammermoor: by Donizetti. Conducted by Marcello Viotti and performed by the Deutsche Oper Berlin. Soloists include Manuel Lanza, Lucia Aliberti, Alfredo Kraus and Volker Horn; 7.30pm; May 6
● La Traviata: by Verdi. Conducted by Shao-Chia Li and performed by the Komische Oper. Soloists include Nadelmann, Fedin and Dobber; 8pm; May 5
Staatsoper unter den Linden
Tel: 49-30-2062861
● Der Rosenkavalier: by R. Strauss. Conducted by Donald Runnicles and performed by the Staatsoper unter den Linden. Soloists include Tina Kiberg, Günter von Kannen and Iris Vermillion; 8pm; May 4, 7 (8.30pm)

BRUSSELS
THEATRE
Fideus de Bruxelles
Tel: 32-2-507 83 80
● Molly Sweeney: by Brian Friel (in

French). Directed by Adrian Brine. The cast includes Cristian Crasay, Danièle Denie and Luc van Grunderbeek; 8.15pm, Mon 6.30pm; from May 8 to May 11

CHICAGO
EXHIBITION
Art Institute of Chicago
Tel: 1-312-4439500
● Contemporary British Architects: Recent Projects from the Architecture Section of the Academy Summer Exhibition: this exhibition features 80 architectural drawings, models and photographs from leading British architects as well as up-and-coming practitioners; to May 5

COLOGNE
OPERA
Opernhaus Tel: 49-221-2218240
● Die Zauberflöte: by Mozart. Conducted by Georg Fischer and performed by the Oper Köln. Soloists include Dieter Schweikart, Rainer Trost, Martina Rüping and Irilde Martínez; 7.30pm; May 4

LONDON
DANCE
Royal Opera House - Covent Garden Tel: 44-171-2129234
● Anastasia: a choreography by Kenneth MacMillan to music by Tchaikovsky and Martinu, performed by The Royal Ballet. Soloists include Leanne Benjamin, Stuart Cassidy and Jonathan Cope; 7.30pm; May 3, 9

OPERA
London Coliseum
Tel: 44-171-6380111

● Fideio: by Beethoven. Conducted by Richard Hickox and performed by the English National Opera. Soloists include Anthony Rolfe Johnson, Kathryn Harries and Peter Sidhom; 7.30pm; May 3, 6

THEATRE
Lyttelton Theatre
Tel: 44-171-9210631
● Blue Remembered Hills: by Dennis Potter. Directed by Patrick Marber and performed by The Royal National Theatre. The cast includes Geraldine Somerville; 8pm; May 3, 4 (also 3pm), 6

LOS ANGELES
EXHIBITION
Los Angeles County Museum of Art Tel: 1-213-857-6000
● Photography and Beyond in Japan: Space, Time and Memory: this exhibition of some 90 works by 12 artists surveys the diverse uses of photographic media that have evolved in Japan in the last 15 years and the interrelationships between western and Asian influences. The exhibits range from traditional prints to sculptural works, and from conventional formats to computer-synthesized pictures; to May 5

NEW YORK
CONCERT
Alice Tully Hall
Tel: 212-875-5050
● Emerson String Quartet: perform works by Dvorak, Rorem and Brahms; 2pm; May 5
Avery Fisher Hall
Tel: 212-875-5030
● The National Choralale: with conductor Martin Josman perform

Brahms' Requiem and Bernstein's Chichester Psalms. Soloists include Rebecca Copely and Julian Robbins; 8pm; May 3

EXHIBITION
MOMA - Museum of Modern Art, New York Tel: 1-212-708-9400
● Lilly Reich - Designer and Architect: the first exhibition devoted to this modernist German designer of the 1920s and 1930s; to May 7

OXFORD
EXHIBITION
Museum of Modern Art
Tel: 44-1865-722733
● Carl Andre Sculptor 1996: the first large retrospective exhibition of Andre's sculpture to be seen in Britain for 20 years. Highlights of the exhibition include the reconstruction of the installation *Equivalents I-IVII*, created by Andre in 1966, and the 11 metre square piece called *6-Metal Figure* (from Mendeleev); from May 5 to Jun 30

PARIS
CONCERT
Salle Pleyel Tel: 33-1 45 61 53 00
● Orchestre Philharmonique de Radio France: with conductor Günther Herbig perform Mozart's Symphony No.38 in C, K425 and Mass in C minor, K427. Soloists include R. Fleming, I. Tamar, I. Beuzon and T. Fechner; 8pm; May 3

ROME
CONCERT
Accademia Nazionale di Santa Cecilia Tel: 39-6-3611064
● Orchestra dell'Accademia di Santa Cecilia: with conductor

Myung-Whun Chung, soprano Nina Fautio, mezzo-soprano Cinzia De Mola, tenor Gary Lakes and bass Marek Gaszdecki perform Debussy's *La Mer* and Janáček's *Glagolitic Mass*; 5.30pm; May 5, 8 (9pm), 7 (7.30pm)

SAN FRANCISCO
EXHIBITION
California Plaza of the Legion of Honor Tel: 1-415-863-3330
● Pergamon: The Telephos Frieze from the Great Altar: exhibition of rare and renowned works of Hellenistic sculpture from the second century BC. Twelve newly restored relief sculptures from the Telephos frieze that once decorated the interior court of the Great Altar of Pergamon are on display, along with some 30 other works that help explain the original purpose and placement of the Telephos frieze; from May 4 to Sep 8

ZURICH
OPERA
Opernhaus Zürich
Tel: 41-1-268 6666
● Orindoo: by Cavalli. Conducted by Veronica Scully and performed by the Oper Zürich; 8pm; May 3, 5 (5pm)

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Peter Martin

Polishing up Rover's act

Patience will be needed if BMW is to overcome the inherent difficulties of transferring its premium-pricing strategy to its UK subsidiary

It seems so tempting. In industry after industry, troubled companies plan to escape from their problems by following a BMW strategy: premium pricing for a premium product; technical excellence combined with glamour; limited volume but high returns.

Apple is just the latest company to try to adopt this approach. But following in BMW's footsteps isn't easy. In fact - as this week's news suggests - even BMW finds it difficult at times.

BMW is trying to apply the recipe it used to escape from near-bankruptcy in 1989 to Rover Group, its recent British acquisition. On Monday, however, it announced that Mr John Towers, who had transformed Rover's manufacturing processes before the BMW deal, was leaving as Rover's chief executive.

Mr Towers may indeed have had long-lead plans to leave; he may well be in line for one of the slew of top UK engineering jobs now available. But his departure does nothing to dispel the general impression that BMW is unhappy with the short-term performance of its British acquisition.

Of course, ostensibly friendly cross-border takeovers often follow such a trajectory, particularly when the product is enveloped in national sentiment. First, all is sweetness and light; the acquirer goes out of its way to praise the quality of its new workforce, the depth of managerial talent, the strength of the brand. The subsidiary's long-cherished investment plans are given the parent's blessing. Long-term strategic sourcing plans are agreed.

Then things start to go a bit sour. National characteristics grate a little. Differences over accounting standards, transfer prices or engineering philosophy leave one side or the other feeling disgruntled. Before long, all the original directors have moved on, leaving the parent to choose more sympathetic managers.

Over time, the characteristics of the parent win out. The

result may be a long-term improvement in the subsidiary's performance, but there is usually little sign of the "best of both cultures" promised at the time of the acquisition.

BMW's experience with Rover may be no more than a playing-out of that familiar pattern. But it may also reflect the inherent difficulties of the strategy it is applying. The essential ingredients are demanding ones.

The most expensive of these - sustained high levels of investment to achieve the performance edge that the product positioning requires - is also the simplest. This merely requires deep pockets, which BMW certainly possesses: it has already doubled Rover's investment rate.

More complex are the other requirements. Obtaining superb and ever-improving quality requires the collaboration of the entire company, from managers to cleaners. Rover had made great strides in this area before the BMW takeover, and was certainly at the top of mass-market quality standards. But there has been a suggestion that it is making heavier weather of the higher standards and continuous improvement that a BMW strategy requires.

Achieving markedly superior product design and engineering is equally demanding. In Rover's case, this means restoring design and engineering resources squeezed to vanishing point in the crises of the 1970s and 1980s. But in the car industry generally, it means coping with ever-tougher competition.

Each year, a greater leap in design and engineering is needed if you hope to persuade the public that the difference is great enough to warrant a premium price. And any British-based car manufacturer faces a special task.

The car-buying - or, in the case of company fleets, car-choosing - public has no preference for its own indigenous brands. Indeed, at the upper end of the price range, there is a marked bias in favour of imports. Once such an attitude takes hold, as General Motors is finding in its attempts to resuscitate Cadillac, years of image-enhancement are required to overcome it.

Time is, indeed, the fourth demanding aspect of the strategy. A genuinely innovative product - the first working hall-point pen, the first truly portable computer, a better-tasting artificial sweetener - can obtain a price premium

from the outset. Such a premium is essentially temporary, quickly competed away by imitators. Long-term premium pricing, however, requires long-term achievements in design, image and quality.

In mature industries such as cars, where breakthrough innovations are rare, this long-term premium pricing is the Holy Grail. It is exactly what BMW has achieved.

Time and consistency are very powerful weapons. A company can offset any temporary weakness in product range, for example, by allowing an unexciting model to draw on the lineage of past outstanding designs. As long as the next model is a return to form, no lasting damage has been done, and margins have been kept up in the meantime. BMW's strategy, forged in the aftermath of the 1989 crisis, took two decades to come to its full flowering. Time is probably the greatest gift that BMW can give to Rover. Patience is a virtue it is easier to exercise close to home, however.

The replacement for Mr Towers, it is said, will be a British executive from outside both Rover and its parent. The news comes in the same week as the departure of career gasman Cedric Brown from British Gas and reports that ICI may replace nearly a quarter of its top managers with outsiders over the next 18 months.

Meanwhile, GEC has just chosen a new boss from Lucas, GKN has filled its top job with an executive from BOC. Several other engineering companies are looking for bosses, and the assumption is that they will come from outside. It sometimes seems that no-one in British industry rises to the top from inside the company any more.

If the habit of recruiting chief executives from outside has become more prevalent, why has it happened? One possible explanation is the shift of

power within the boardroom over the past decade. Once, executives dominated the board both numerically and in practical terms. Now, thanks in part to the Cadbury committee on corporate governance, there are more non-executives with an increasingly important role.

On routine decisions, of course, they usually end up deferring to operating expertise. But on big, one-off choices, such as a new chief executive, they come into their own. When such issues arise, the grass on the other side of the fence always looks greener, someone else's well-publicised chief executive seems a bit more glamorous than the inside candidate.

A second reason, often cited by outgoing chief executives with a sigh, is that de-layering has removed the senior coordinating jobs in which putative successors obtained wide-ranging responsibilities.

These demand-side forces meet a supply side of headhunters anxious to deliver the new chief executives their clients want. But is the resulting musical chairs at the top of British industry desirable? Let's end this article where it began, with a lesson drawn from BMW, undoubtedly one of Europe's best-managed companies.

How has it selected its chief executives? The 1989 rescuer, Herbert Quandt, came from outside, but he immediately appointed an insider, Paul Hahnemann, to run the company. It was Hahnemann who devised the successful BMW strategy. Score one for the insiders.

Hahnemann's successor, however, was Eberhard von Kuehnelt, who had joined the company only five years before from Robert Bosch. It was under him that BMW pushed into export markets, with great success. One-ah. Since 1993, the management board chairman has been Bernd Pischetsrieder, a career BMW man. Two-one to the insiders. Is there a lesson there for British industry?

A miracle mixture in the growth hot-house

BOOK REVIEW - Peter Montagnon

ASIA RISING: By Jim Rohwer
Simon and Schuster, \$25, 382pp

If Jim Rohwer is lucky, he will make enough out of *Asia Rising* to buy the house he covets in the old French concession of Shanghai. If he is right, that house will be worth a fortune by the time he retires.

It is difficult for anybody with more than fleeting contact with Asia not to come under the spell of its phenomenal growth. Rohwer, who spent several years as Asia editor of *The Economist* before joining CS First Boston, is no exception.

In 1960, he notes, South Korea was no richer than Sudan; Taiwan was as poor as Zaire. Even in Japan incomes were only an eighth as high as those of the US. Around that time Gunnar Myrdal, a Nobel Prize-winning economist, wrote a 2,200-page book bemoaning Asia's lack of export prospects.

Now the conventional wisdom has changed. Between 1965 and 1990, the leading economies of east and southeast Asia grew three times as fast as those of the industrialised world. Like most Asia hands, Mr Rohwer assumes that growth will continue.

This book is an attempt to explain the Asian miracle. But it also raises some important questions. Is the miracle really sustainable? And what are the implications for the west?

Though circumstances differ from country to country - Taiwan's approach was radically different from the industrial championing favoured by Korea - Mr Rohwer finds several common factors behind the region's success.

Asia may have an authoritarian tradition but its governments are less interventionist than those of western democracies. "In human life, economics precedes politics and culture," said Mr Park Chung Hee, who seized power in Korea in 1961. Asian governments have not been big spenders on welfare,

and thus do not generally run large fiscal deficits.

That in turn makes people more self-reliant and adaptable, more inclined to save, and more appreciative of the social cohesion inherent in family life. Since governments distribute less largesse than in the west - even South Korea has been ruthless in cutting off industries that failed to perform - there is less wasteful spending on vested interests.

Another important difference between Asia and other developing regions was its openness to new technology and new ideas. Brazil tried in vain to develop a protected indigenous computer industry in the 1980s with disastrous consequences for other sectors which depend on electronics such as aerospace. Asia by contrast has been willing to import technology and has not imposed on itself the handicap of an inflexible industrial policy.

Somewhere in this mix lies the secret of Asia's success. Mr Rohwer attaches great importance to the close-knit networks of the overseas Chinese, but, like the rest of us in the western media, he has difficulty breaking in.

Legend has it that in 1987 Mr Li Ka-shing, the billionaire Hong Kong Chinese businessman, assembled the finance needed for his unsuccessful bid for Hongkong Land in a single all-night session with his main-jong playing chums. That is an awesome feat of financial muscle. It would be intriguing to know more, but the chapter on the overseas Chinese is a mere 14 pages. The Chinese entrepreneurs who play such an important role are conspicuous by their silence.

The region has its frailties, too. Rohwer says its institutions may be too weak to regulate the complex economies that are now emerging. Its infrastructure is creaking and its financial system primitive.

There is a security risk in China's growing power and in North Korea. There is also the risk that Asian society will

become labby as its newly affluent middle classes demand more democracy and welfare.

Mr Lee Kuan Yew, Singapore's senior minister, cautions that "we can't have single mothers. It's totally unacceptable, and we keep it unacceptable." But divorce rates have risen, and government spending has grown sharply in the new democracies like Taiwan.

Rohwer's guess is that Asia will steer its way through these minefields. Growth will continue, though it might slow down for a while around the turn of the century as the infrastructure problems are finally dealt with.

The west, he argues, should see in this an opportunity rather than a threat. The new Asia middle class will create a massive consumer market. McKinsey, the consultancy group, reckons that ownership of colour televisions shoots up from under 40 per cent to about 75 per cent when average annual incomes reach \$1,000. China already had 60m consumers in this pool in 1992. The number will be 270m by the turn of the century.

The other side of the coin, which Rohwer downplays, is the impact on commodity prices. Grain prices are creeping up as Asians demand more food. Oil demand will grow as they drive more cars.

Western societies will have to pay higher prices for these commodities too. Asia with its canny ways may learn to compensate with higher productivity. The west, which is less adaptable, may simply grow relatively poorer.

That is a real concern for the rest of the world, particularly now that China with its 1.2bn people has joined the fast-growing league. Rohwer makes little of it. But with his house in Shanghai, he will at least have hedged his bets.

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LETTERS TO THE EDITOR.

Number One Southwark Bridge, London SE1 9HL

We are keen to encourage letters from readers around the world. Letters may be faxed to +44 171-873 5938 (please set fax to 'fine'). e-mail: letters.editor@ft.com Translation may be available for letters written in the main international languages.

Cost of ethically unacceptable behaviour

From Prof Michael Singer.

Sir, Your leader "Sexual harassment" (April 29) appeared on the same day as detailed press reports here of the allegations against Mitsubishi. The Equal Employment Opportunities Commission alleges in its lawsuit that supervisors at Mitsubishi routinely addressed women employees as "slut", "whore" or "hitch" rather than by name, that men grabbed women's breasts, buttocks and genitals, that a male employee put an air gun between a

female co-worker's legs and pulled the trigger, that some women had their work sabotaged, resulting in injuries, and more. If these allegations are true, the EEOC is protecting fundamental rights and not, as you put it, trying "to codify such complexities as relationships between the sexes".

Grossque behaviour of the kind alleged is not only ethically unacceptable, it imposes an economic cost on society. Gross discrimination makes the job market less

attractive to women, and thus distorts the free market just as surely as a combination among traders to crowd out a competitor.

Michael Singer,
executive director,
International Rule of Law
Institute,
The George Washington
University Law School,
Washington DC 20052, US

From Prof Helen Wallace.

Sir, The tone and content of your editorial "Sexual

harassment" suggests that you have forgotten that you have a lot of some women readers. There is no difficulty with the law in any country as long as in the workplace men (and, of course, women) keep their hands and their intentions to themselves. This is not an issue of "political correctness", but of decent and respectful behaviour towards colleagues.

Helen Wallace,
49 St James's Drive,
Wandsworth Common,
London SW17 7RN, UK

Support for Nigeria is needed

From Mr P. Parker.

Sir, We are saddened to read the on-going criticism of Nigeria in the media. Nothing is achieved in this complex world by boxing your friends into a corner.

Nigeria is the most populous black country in Africa, having great importance to the world's oil-based economy and to us in the UK, a significant trading partner.

The British have a well-earned reputation of being excellent diplomats and we ask on behalf of all those who trade with Nigeria for a better understanding of today's Nigeria.

Yes, there are tensions, and, let it be said, Nigeria has a legacy of problems whether ethnic or of a political nature. But we must not fall into the easy, and maybe comfortable, position of political correctness with simple dictation to Nigeria of our western terms of acceptability.

To achieve stability and prosperity in the country, Nigeria must be able to look to its friends for respect and support.

P. Farmer,
"Understanding Nigeria"
Group,
ABC (Afrab European
Company),
35-37 Brompton Road,
Knightsbridge,
London SW3 1DE,
UK

Greater transparency before forgiving debt

From Mr Earl A. Ziegler.

Sir, Your leading article "Relieving debt", April 24 could have been written by the well-meaning folk at Oxfam and Christian Aid. The piece argues that the eight to 20 heavily indebted poor countries named in last week's proposals for relief of World Bank/IMF debt, are crippled in their efforts at self-improvement without such relief.

It ends by saying that it would be "inexcusable" if the "relatively trivial obstacles" presented by the dissenting votes on the boards of these two august institutions were not overcome by their September annual meetings.

What nonsense! Many of the named countries became over-borrowed due to corrupt leadership. If they are an embarrassment to the Bank or

Fund through non-payment of obligations, perhaps greater discipline needs to be demanded of them, before any thought of debt-forgiveness is entertained.

The qualifying macroeconomic demands traditionally made by two institutions are often waived, for political reasons, when countries fail to realise them completely, witness Russia, Ukraine, Poland, Mexico and, most recently, Kenya.

It would be most useful if the organisations were to demand far greater micro-transparency and accountability on the part of these heavily indebted nations, before thinking of selling off their reserves in funding unmerited debt-forgiveness programmes. Of the listed nations, far greater favour should

certainly be shown to Uganda rather than to Zaire and the Sudan.

Uganda's President Museveni has invited greater long-term micro-auditing of all his government's public sector institutions in exchange for greater debt forgiveness. His worthy initiative should be emulated by others on the Bank/Pund list.

Otherwise, throwing further resources at unaccountable governments would aid neither those countries' poor citizens, nor the moral concerns or financial responsibility of the donor community.

Karl A. Ziegler,
The Centre for Accountability and Debt Relief,
6 Bradbrook House,
Stadio Place,
Kinnerton Street,
London SW1X 8EL, UK

Hardly a global perspective

From Mr Grant Kennedy.

Sir, The advent of globalisation has allowed weak businesses to continue to run where the government would otherwise have had to provide a rescue package. It increases the pool of potential buyers for a given company, thereby improving its liquidity. Clearly there are issues of security that must be addressed when allowing foreign investment to be introduced. Whether the outside interest is Texan or otherwise has no bearing, however.

Your article "Industrialist deplors 'overseas masters'", April 29) states that Sir William Barlow, former chairman of the Post Office and of BICC, the cables and construction company, has had long experience of business operating globally. His summary dismissal of Texans reveals a myopia that falls short of global perspective.

Grant Kennedy,
1701 Millenia Tower,
1 Temasek Avenue,
Singapore 039182

Appropriate

From Mr Richard Bittner.

Sir, Given the circumstances surrounding Chancellor Helmut Kohl's UK visit, your photograph of him reviewing members of the Scots Guards outside 10 Downing Street (April 30) caused me to reflect that it may have been more appropriate for the chancellor to have reviewed a contingent of Beefeaters instead.

Richard Bittner,
Bittner Whitehouse & Cie,
9 rue Charles-Humbert,
PO Box 5132, Geneva,
Switzerland

البريد الإلكتروني

FINANCIAL TIMES

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Thursday May 2 1996

Expanding Nato eastwards

Javier Solana, secretary-general of Nato, has been getting a muted reception on his tour of would-be members in central Europe. That is not surprising, since he has little to offer. "At this moment, no country has been ruled out, and no country has been ruled in", he repeats at each stop.

As President Vaclav Havel pointed out after welcoming Mr Solana in Prague, "it has been six years since the fall of the Iron Curtain". It is also two years since the alliance's leaders declared that they "expect and would welcome Nato expansion that would reach to democratic states to our east as part of an evolutionary process". Last autumn Nato completed its study of "how and why" this process should proceed. But the more judicious decisions on "who and when" will not be taken until this December's summit, at earliest.

One reason for this leisurely timetable is that 1996 is an election year both in Russia and the US. No one in Nato likes the idea of giving Russia, a non-member, a veto on the alliance's decisions. But no one wants, either, to help Gennady Zyuganov, the Russian communist leader, achieve victory in June. In reality there is no reason to suppose that many Russian voters will be influenced by Nato's attitude. But repeated warnings from the Yeltsin camp that Nato enlargement would strengthen hardline tendencies in Russia have clearly had some effect.

Nato enlargement would have the opposite effect. Equally a re-elected Boris Yeltsin can be expected to continue urging his western friends not to isolate Russia by expanding Nato up to its borders.

In addition, and more persuasively, countries such as Ukraine and the Baltic states will continue to plead that their security is more directly threatened than that of any central European country, and that any enlargement leaving them out in the cold might actually make things worse rather than better. Yet no known scenario provides for their inclusion in the first wave of new members.

Slow processes

Ideally, EU expansion should precede or at least accompany Nato expansion. Once central European countries are within the EU their security will be indissolubly connected with that of western Europe, and their inclusion in Nato should seem more natural both to Russians and to Nato's existing members. But advocates of Nato enlargement, especially in the US, are understandably reluctant to make it wait on the slow and tortuous EU processes of intergovernmental conference, reform of the structural funds and common agricultural policy, and separate clause-by-clause entry negotiations with each new candidate for membership.

If the EU were capable of seizing the strategic initiative it would cut this Gordian knot by immediately identifying the first batch of new members and embarking on a broad-brush negotiation with them, aimed at giving them full political membership within two years and leaving the economic detail to be worked out over a long transition period. Nato could meanwhile be working out with Russia a new system of collective security based on the Organisation for Security and Co-operation in Europe.

What is unacceptable is for central Europe to be kept waiting indefinitely while Nato and the EU play "Gaston and Alphonsine". That would dangerously demoralise central Europeans, while encouraging Russians to think they can always intimidate the west if they try hard enough.

Electoral suspicions

Many Europeans believe that US enthusiasm for enlargement is fuelled by electoral considerations (the "Polish vote"). US policymakers strenuously deny this, but say they hope to delay any move on enlargement until after the US election in November, if only in order to refute such suspicions. It may not be easy for them to do so, however, if Senator Dole takes up the theme during the campaign.

Even when both sets of elections are out of the way, the decision may not look any easier. A victory for Mr Zyuganov may well adopt a conciliatory line towards the west, in which case there will be no lack of western voices urging that this line should be encouraged and rewarded, and that hasty

From disunity to defeat

Another round of local elections. Another rout. And another bout of speculation about Mr John Major's leadership. For the government, humiliation in the annual council elections has become a depressing ritual. So too has the fevered gossip at Westminster about the prime minister's future.

There is little doubt that the Conservatives will do badly in today's contests. When the same council seats were last fought in 1992, the government was riding high in the aftermath of its general election victory. Now it trails Mr Tony Blair's Labour party by between 20 and 30 points.

The progressive weakening of the independence of local government has also taken its toll. Most important decisions over spending, services and amenities are taken in Whitehall rather than in the town halls. The incentive for councils to treat the elections as little more than a national opinion poll has never been greater.

Optimists in Conservative Central Office believe the party might lose about 500 of the 1,100 council seats it is contesting this time. The pessimistic forecast are of losses of 900 or more seats. Such an outcome would all but eliminate the Conservatives as a serious force in local government. It would also stoke the fires of speculation as to whether Mr Major should remain.

The answer that Tory MPs should give to that question is an unequivocal yes. Mr Major offered his party the opportunity to choose a new leader last year. It decided against change. Nothing since suggests that the government can climb from the mire by ditching the prime minister.

Bloody contest

Those who assume that Mr Major could be replaced by Mr Michael Heseltine, his deputy, in a bloodless Downing Street coup are gazing in fantasies. In a speech yesterday to the Newspaper Society the prime minister gave too much to be forced out, if he were to be forced out, the deep Tory divisions between left and right, between Eurosceptics and pro-Europeans, would be torn open in a bloody contest. The eventual victor would probably inherit a party which was ungov-

Economic realities

His fiercest critics are demanding an ideological lurch to the Eurosceptic right. They want to fight the general election on a platform of much lower spending and taxation and of an aggressive assault on the authority of the European Union. But this is a prospect which matches neither political nor economic realities.

As Mr Malcolm Rifkind, the foreign secretary, commented yesterday, the UK's national interest lies firmly in remaining an active member of the Union. The government cannot renege on past treaties. And, for all the wishful thinking among some Eurosceptics, the trade and economic advantages of the single market would not be available outside the EU.

Nor can the government secure easy votes by slashing spending on the welfare state to pay for pre-election tax cuts. In a powerful speech this week, Mr Heseltine offered a timely reminder that general elections in the UK are won not from the left or the right but from the centre. It is always tempting for parties to pander to the prejudices and instincts of their core supporters. But, as Labour discovered during the 1970s and 1980s, to do so is to sacrifice the support of the uncommitted centre whose votes are essential to win elections.

If the Conservatives are to retain any chance of political recovery before the general election, they must face such realities. If nothing else, there will be one clear message from the outcome of today's elections. The road of disunity invariably leads to defeat.



A road strewn with obstacles

Bob Dole's chances of defeating Bill Clinton in November's presidential election look increasingly remote, says Jurek Martin

The only poll that matters is the one on the first Tuesday in November when America elects its next president. But a survey of public opinion by Mr Gallup this week should have served as a wake-up call to Senator Bob Dole, now seriously adrift on the road to the White House.

It was not so much the numbers that were chilling for the Senate majority leader and presumptive Republican presidential candidate. A 21-point deficit behind President Bill Clinton may be bad, but previous candidates, including Mr Clinton in 1992 and vice-president Mr George Bush four years earlier, have recovered from double-digit shortfalls.

But it was the invocation of history that showed how steep a hill Mr Dole has to climb. Never in his 60-year record of polling, Gallup said, had any candidate been as far ahead as Mr Clinton six months before election day and gone on to lose. Worse, and unlike 1992, all the movement in public opinion now seems to be in the direction of the incumbent. His Democratic party is also reaping the benefit, to the point that the Republicans might also end up losing the control of Congress they won so dramatically in 1994.

Republicans have been sounding alarm bells for some time, none more loudly than Mr William Kristol, former aide to vice-president Mr Dan Quayle and now editor of the Weekly Standard, a new conservative magazine. "Bob Dole is likely to lose the presidential race to Bill Clinton. He may lose badly," he wrote earlier this week. "The current conventional wisdom in Washington notwithstanding, it is not inevitable that the race will tighten up. Some races simply settle in."

Mr Bill Bennett, education secretary in the Bush cabinet, was

among the first to suggest that Mr Dole stand down as majority leader and get on with the business of waging ideological war against Mr Clinton. But Mr John Kasich, chairman of the House budget committee, wondered if he could, given his apparent inability to "articulate the message".

All three, leading proponents of the conservative revolution that was supposed to have dawned in 1994, have never been particular fans of Mr Dole, to whom new-fangled ideology and ideas have always appeared alien. But the Republican governors of California, New York and New Jersey are cut from his pragmatic cloth and they, too, are now warning of impending disaster.

Mr Pete Wilson this week joined George Pataki and Mrs Christie Whitman in stating that if the Republican party platform continues to demand that abortion be banned, moderate and independent votes will disappear. The governor of California said this, at a press conference, just before a campaign strategy session with Mr Dole.

His intervention brought howls of protest from the Christian Coalition and other social conservatives, and from the rump of Mr Pat Buchanan's campaign. All threatened defections and, in the case of Mr Buchanan, a third-party movement should the pro-life plank be ditched.

Mr Dole, never comfortable in talking about abortion in public, sought to placate both sides - thus satisfying neither. He agreed to Mrs Whitman's appointment as a convention co-chair but placed two strong anti-abortionists in charge of the platform committee.

A convention split over the issue, echoing the Houston battle four years ago, bodes ill for Mr Dole's appeal to women voters, among whom he must do better to stand a chance in November. If the 1994

Republican congressional landslide reflected the temporary ascendancy of the "angry white male", the gender gap is now working in the opposite direction, with poll after poll giving Mr Clinton a 20-point lead among women. This is partly because of abortion and partly women's fears about the radical changes to the healthcare and welfare system proposed by Republicans.

But whenever Mr Dole bends in a clearly popular direction, conservatives hold his feet to the fire. Increasing the federal minimum wage, last raised to its present \$4.25 an hour in 1993, is a case in point. Whatever the arguments of economists and the business lobby, it commands broad support, including among moderate Republicans.

Mr Dole conceded recently that an increase was probably "inevitable", an admission that induced a volcanic eruption from Rush Limbaugh, still influential from his rightwing radio talk booth.

The minimum wage issue is but one example of how the Democrats in Congress, more united than at any time since the 1960s, are making it hard for Mr Dole to run for president from Capitol Hill. They are doing to him what the Republicans did to the Clinton agenda in 1994 when comprehensive healthcare reform and a fiscal of other proposals were defeated, blocked and eviscerated. The clear purpose is to deny the Republicans any record of legislative achievement on which to run in November.

This fiscal year's budget has finally been agreed, but only after Republican concessions on the environment and education. On immigration reform, this week's priority, he has to persuade a fellow Republican, Senator Alan Simpson from

Wyoming, not to support the sort of reductions in the influx of skilled foreign workers that the Republican business lobby is set against.

The recent surge in petrol pump prices, Mr Dole is discovering, does not respond to a quick-fix solution. Repealing the 4.3 cents-a-gallon tax surcharge of 1993 has obvious political appeal but the budgetary consequence - the loss of \$30bn in revenues over six years - has forced him to settle for a modest one-year suspension. Even this left him open to a fast White House counter-attack pointing out how often he has supported higher petrol levies.

Health insurance reform, another cause popular in both parties, is proving a minefield. There are few disagreements with this modest measure making coverage portable from job to job. But if Mr Dole insists on including tax-free medical savings accounts, a conservative priority, the whole bill may be lost - either in Congress or to a presidential veto.

But Congress is Mr Dole's millenium and he is unlikely to improve his ratings should he leave it for the campaign trail. The latest set speeches - on the "liberal" Clinton judiciary and the evils of "socialist" public housing - have been wooden. One, in Indianapolis last Saturday, was delivered so late it went largely unreported, a problem that his less-than-press-friendly campaign encountered in earlier primaries. If there is a "vision", it remains obscured.

Nor is there much encouragement in the "peepstakes" along for his choice of running mate. A lethal insider's article by Fred Barnes in the Weekly Standard describes a "dirty bloody battle" between leading aspirants, among them four midwestern governors, former governor Carroll Campbell of South Carolina and Senator John McCain of Arizona. Much of the mud is

being thrown at one of them, Mr John Engler of Michigan, variously portrayed as looking like a "thug", a womaniser and a draft-dodger.

Mr Colin Powell, the former chairman of the joint chiefs of staff, is seen by many as the only person who can put a Republican in the White House. But there is no evidence that he is interested - and if he were, it may be wondered why he would be interested in second places on the party ticket.

There may be less to fear for Mr Dole from a Ross Perot candidacy, should one emerge. Some polls suggest the electronics billionaire now draws as much support away from Mr Clinton as Mr Dole. But in important states, especially in the south, he could have the opposite effect. In his native Texas, for example, a Perot presence, together with mobilisation of the Hispanic vote by Mr Victor Morales, the Democrat running against Senator Phil Gramm, could greatly improve the president's chances on what is now unfriendly ground. Second-guessing Mr Perot's intentions is notoriously difficult, but the man's ego is vast and, as Cragg Hines of the Houston Chronicle wickedly points out, the law prevents Mr Perot spending more than \$1,000 on any candidate other than himself.

Mr Dole, his primary funds, unlike Mr Clinton's, almost exhausted, cannot spend much to promote himself outside Washington over the summer. So he presumably must stay and slug it out in the congressional trenches.

And he must repeat to himself that a decent, moderate conservative ought to have a fighting chance against an incumbent whose popularity is not in the stratosphere and who could be undone by anything from Whitewater to Russia or Bosnia. But sadly for Mr Dole, that is not what the pollsters are finding with six months to go.

OBSERVER

Zen and the art of voting

Referendums have a way of unleashing emotions. Take next Sunday's poll in Berlin and the surrounding state of Brandenburg, where voters are being asked to decide whether the two should merge into one single Land.

In an attempt to mobilise the conservative, historically aware vote, the Christian Democratic party in the post-war Berlin suburb of Zehlendorf has put out posters stating that a merger would bring a return to a "Christian Prussia".

"This is a bit naughty as Prussia - at whose heart sat the present-day region of Brandenburg - was abolished by the Allied Powers after the second world war, on the (perhaps unfair) ground that it was the root of all German militarism. And while most of its citizens were certainly nominally Christian, Prussia always prided itself on religious freedom, as far back as Frederick the Great.

Such inaccuracies have not been lost on the youth wing of the Social Democratic party, which has responded with posters calling for a "Buddhist Saxony", Prussia's long-time neighbour and rival.

Such humour is unusual for a political campaign in Germany. But then the referendum seems to have acquired its own taste for comedy. Brandenburg's

minister-president - Manfred Stolpe - and his Berlin counterpart - Eberhard Diepgen - recently mounted a motor-bike and a tractor, to show just how easy it is for city and country to come together. Great photo-call - but hardly very Prussian.

Italian dribbling

Franco Bernabè is one man who has breathed a big sigh of relief at the centre-left victory in the Italian general elections. As chief executive of ENI, the partially privatised and highly profitable state oil company, his job was in the firing line from an incoming rightwing Berlusconi government.

Technically he should have been confirmed or replaced a month ago, but the Dini government shied away from moving on such a sensitive appointment in the election run-up. Now word has gone out that Bernabè will on May 14 be confirmed as chief executive for another five years.

The Italian public at large is far more concerned by the fate of another manager, affected by politics of a different kind. At stake is the future of Fabio Capello, indefatigable manager of AC Milan, the cup-winning football team owned by Silvio Berlusconi.

Capello last weekend saw Milan win its fourth league title in his five years' management. His contract is up and he wants to join Real Madrid. But Berlusconi is

reluctant to let him go, so are the fans.

My dear, it's divine

Late last night, Lama Yeshe, the abbot of the Senge-Ling Tibetan Centre near Eskdalemuir in Scotland, arrived in Moscow. His mission - to help set up the city's first Buddhist temple. He is there at the invitation of the city's budding Buddhist community.

Buddhism has been attracting thousands of new adherents, particularly among the young. Testifying to the religion's new popularity, the Dalai Lama himself is planning a visit.

Observer spots an opening here for Boris Yeltsin, now facing a tough prospect in the forthcoming presidential elections. While his communist rival Gennady Zyuganov is embracing old workerist symbols, Yeltsin could drop by the new temple and ingratiate himself with the disaffected youngsters. Mind you, he'd probably only be greeted by the sound of one hand clapping.

Brother love

How incestuous is the world of French investment banking. There was a time when Lazard Frères advised on every deal, sometimes on both sides. Now the Americans have broken in on a transaction at the heart of the French financial

establishment. Goldman Sachs is advising Crédit Agricole on its acquisition of Banque Indosuez. Compagnie de Suez has retained Morgan Stanley.

But the community of French investment bankers remains small. Family-sized, in fact. Goldman Sachs's team is led by Yoel Zaron, Morgan Stanley's by his brother Michael. Other investment banks wanting to get into the Parisian scene can always call the middle brother, currently an optician.

Cook heats the pot

Robin Cook, Britain's shadow foreign secretary, has been taking the temperature in Hong Kong. Including a walkabout with Governor Chris Patten in Wanchai, the gritty bar district. Cook was extremely impressed by the warm reception Patten received. So does he see Patten as potential leader of the Tories? Ever humble-footed, Cook merely said that Patten "has achieved much more popularity in Hong Kong than he could ever possibly achieve with the Conservative party in Britain".

The normally icy Cook continued. He would require an awful lot of persuading, he said, of the need to replace Patten, should Labour take office after the next general election. Maybe not such a ringing endorsement - the poll is up to a year away, and Patten has to give Hong Kong back to the Chinese in July 1997.

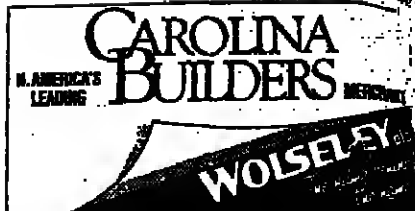
Financial Times

100 years ago

Assassination of the Shah
A despatch from Teheran announces that the Shah of Persia has been shot. The doctor of the German Legation who attended his Majesty only arrived in time to certify that life was extinct. (Reuter).
The news that the Shah has been assassinated will cause a shock of surprise and indignation throughout Europe, where the unfortunate potentate was well known, owing to his not infrequent visits. The motive of the crime is not yet known; possibly it never will be. The political consequences of the event may be far-reaching. (The Shah assassinated at a time of increasing exposure by his country to western trade and ideas via Nasir ud-Din.)

50 years ago

Canadian Pacific Railway
Despite a falling off in traffic volume in 1946 - a trend which is expected to continue - Mr. D.C. Coleman, chairman and president of the Canadian Pacific Railway Company, does not anticipate that calls upon railway activities will be drastically reduced in the immediate future. But he warned shareholders at the annual meeting in Montreal yesterday that the existing narrow margin between earnings and expenses left the company extremely vulnerable.



LEGAL DEFINITIONS
 property n. *Brit.* 1 leaf tea served from a silver pot (usu. *Earl Grey, English Breakfast* etc.)
 2 something owned; a possession, esp. real estate.
 see ROWE & MAW: asap (ph 0171-348 4382)

Rowe & Maw
 LAWYERS FOR BUSINESS

Italian poll winner offers key posts to Berlusconi

By Robert Graham in Rome

The rightwing alliance headed by Mr Silvio Berlusconi, the former Italian prime minister, has agreed to discuss an offer from the Olive Tree coalition, which won last month's general election, to take important posts in the new Italian parliament.

The decision comes as the rightwing parties are debating whether to act as a united opposition such as the Italian parliament has never seen before.

Immediately after the rightwing parties' election defeat, Mr Giuliano Ferrara, editor of the pro-alliance daily *Il Foglio*, argued strongly for the creation of a British-style opposition.

He said the alliance parties should combine to form a coherent opposition block, form a shadow cabinet and reject any deals with the government. In this way the opposition could prepare for the next elections to offer a genuine alternative.

But the defeated rightwing alliance has yet to reconcile widely differing positions. Mr Berlusconi entered politics two years ago purely to become prime minister, and his Forza Italia movement is still wholly unaccustomed to the idea of opposition.

The former Christian Democrats who agreed to ally with Mr Berlusconi are equally opposed to opposition, while the National Alliance of Mr Gianfranco Fini is handicapped by the need to prove it has dissociated itself from its fascist heritage.

The leading figures in the rightwing alliance met on Tuesday to discuss the future of the opposition, and the agreement to accept the Olive Tree offer suggests the moderates overcame those arguing that the opposition should cut no deals with the government.

After the April 21 general elections, Olive Tree leaders made clear they wanted a constructive dialogue with the opposition. Both Mr Romano Prodi, the Olive Tree leader, and Mr Massimo

D'Alema, head of the Party of the Democratic Left (PDS), the dominant group in the alliance, said they did not want a situation in which the victors at the polls occupied all the seats of power.

The offer to Mr Berlusconi and his allies was intended to prevent a repetition of the situation produced by the March 1994 general election. Then Mr Berlusconi's rightwing alliance sought to place its members in all the major jobs in parliament and recruited supporters for posts in sensitive state companies and institutions such as the Rai broadcasting organisation.

The Olive Tree is willing to offer the Berlusconi camp the post of speaker of one of the two houses of parliament and the lead role in at least two of the main parliamentary commissions. The speakers of the senate and chamber of deputies are the two most important institutional roles after the presidency.

Observer, Page 15

Developing nations criticise Asian bank over loans

By Edward Luce in Manila

Leading Asian borrowers, including Malaysia and China, strongly criticised the Asian Development Bank yesterday for attaching stringent conditions to its loans.

Mr Anwar Ibrahim, deputy prime minister of Malaysia, said the ADB, holding its annual meeting in Manila this week, had displayed "bureaucratic rigidity" to recipient countries and had often failed to pursue proper development aims.

Neither country singled out specific policy conditions for criticism, but the speeches were a thinly veiled attack on the ADB's goal of ensuring that 40 per cent of total loan volume and 60 per cent of all projects be directed to social and environmental ends.

The policy, which the ADB adopted in 1994, was seen as a concession to the aims of leading western donors, notably the US.

Meanwhile, China and India have complained at being excluded from the ADB's soft-loan window, which extends subsidised loans to poorer Asian nations. The US rejected their demand for eligibility.

Mr Ibrahim told the ADB governors: "Imposing uniform measures on every country by ignoring their level of development and social costs involved in the reform process would be tantamount to a form of punishment on the borrowers."

"Donors should not use their contributions as a means to dictate terms and conditions that aggravate rather than alleviate the difficulties of poor countries."

The ADB, which until 1994 concentrated lending almost exclusively on set-piece infrastructure - mainly power and transport - projects aimed at boosting economic growth rates in Asia, has experienced difficulty in splitting the loans halfway between social and more commercial projects.

"Financial rates of return on social and environmental projects are often too low for market-level interest rates on the loans to be viable."

The cost of borrowing on more traditional projects has subsequently been pushed up to a minimum 11 per cent to accommodate subsidies on the "softer" lending projects.

Countries such as China have complained this is tantamount to meddling in its domestic politics. "The bank should give adequate attention to the importance of economic growth in its pursuit of social development objectives," Mr Jin Jieyan, deputy governor of the People's Bank of China, said yesterday.

"To impose conformity... is not likely to work and may even produce an adverse impact on some developing members."

US seeks to bar China, India from fund, Page 6

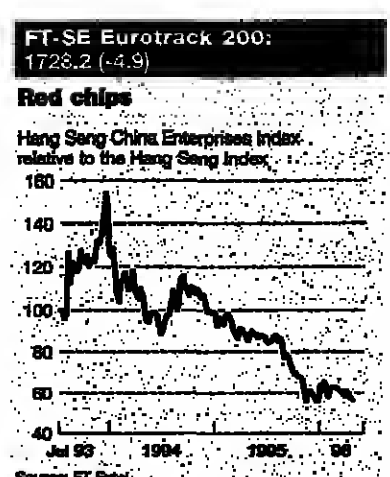
Chinese crackers

THE LEX COLUMN

The cut in Chinese interest rates has more symbolic than practical significance, given the state of China's banking system. However, it suggests that after almost three years of austerity, when the government tried to subdue an economy that was totally out of control, the authorities are finally taking their foot off the brakes. Hence the surge in share prices of Hong Kong-listed Chinese companies yesterday.

Chinese interest rates are an extremely blunt instrument, since banks do not operate as commercial organisations and lending has traditionally been dictated by local party chiefs. But with retail price inflation at 8 per cent in the first quarter - down from a 1994 peak of 21 per cent - the government is signalling that it feels able to add fuel to the economy again. There is a risk that the alling state sector will see this as encouragement to stick its snout back into the banking trough. The 26 per cent increase in state bank loans in the first quarter rings some alarm bells. However, Beijing has established greater control over the regions and should be able to prevent another feeding frenzy. Besides, a more active interest rate policy offers hope that the government will accelerate reforms of the banking system.

Given the flood of money into Hong Kong that accompanied mainland China's last economic boom, the colony's property developers represent probably the most sensible bet on an easing of the Chinese austerity programme. After all, 12 of the 18 Chinese companies listed in Hong Kong saw profits fall last year, and slack management was as much to blame as the economy.



Northwest's cold shoulder, is to look elsewhere. As one of the best operated European airlines, it would have no problems finding another partner: indeed, American Airlines, still flying solo, might welcome an approach. In addition, KLM has said it still wants to hook up with another European airline. All this means the dream-team of British Airways, KLM and American is still worth fantasising about.

UK power

If Britain's generators have a clear "plan B" strategy, they are keeping it well-hidden. The problem is simple: the government's decision to block their bids for regional electricity companies has left them with remarkably strong balance sheets and nowhere to put the money. The right answer now is to hand big sums back to shareholders, reshaping the companies' inefficient capital structures.

The worry for shareholders is that it is far from clear whether this is the plan - or indeed whether there is one. For managements, there must be a strong temptation to hold back, keeping investors sweet with a promise to increase dividends over the medium term. That way, cash can be gradually dribbled out to help massage the gloomy prospects for earnings. And a big war-chest can be kept handy, so managements need not be stuck with the boring business of managing a UK generator.

If sound acquisitions can be found, this is all well and good. But with high-paying US power companies scouring the globe, the odds are against it: the hot competition in recent Australian power sales is certainly a bad sign. Moreover, keeping balance-sheets strong on the off-chance of some natty acquisition is

not only inefficient; it is also dangerous. It offers a particularly juicy target for the Labour party's planned wind-fall tax. And it leaves the companies vulnerable to takeover. For National Power in particular, handing out a big chunk of cash now would certainly raise the stakes in its poker game with Southern Company.

The generators are busy making up their minds. If shareholders want their interests to be heeded in this process, they need to get moving, and make their voices clearly heard.

Railtrack

The train is leaving the station, and it is time for investors to decide whether to hop on. A glance at Railtrack's financial strength provides powerful reasons to do so: formidable scope for cost-cutting, fat provisions to absorb any nasty surprises and a distinctly healthy balance sheet. Yet most investors are taking a highly conservative view of the company's future cashflow, with a more realistic view setting in over time the prospects for the shares should be rosy. But even if the cautious view turned out to be correct, it would not justify a yield as high as the 6.8-7.6 per cent range for retail investors implied by the indicative pricing. Even the water sector, which the market tends to undervalue and which is much further down the cost-cutting curve, trades at an average of 6 per cent.

As yet, say the doubters, but what about the Labour party? They are right to take the threat seriously. Forget nationalisation; it is Labour's plan to bring the rail regulator under government control which is the real worry. That would give it the power to exploit Railtrack's financial strength to political advantage: it could, for instance, force the company into a chronically uneconomic investment such as Crossrail. Railtrack could avert this threat by tightening its balance sheet, handing cash back to shareholders before the election. But investors cannot count on it.

In short, investors have to balance the company's financial potential against the likelihood that a Labour government will constrain investors' ability to get their hands on it. This is not vastly different from the judgment investors have to make in the water sector; if anything, the big difference in rail is not that the political risks are higher but that the financial potential looks greater. Yet the shares are cheaper. They are a buy.

Additional Lex comment on textiles, Page 23

News Corp group in TV card law suit

Continued from Page 1

success of BSkyB, and other parts of News Corp's TV interests, because they are designed to ensure only paying subscribers receive transmissions.

In taking action against Mr Bruce Hundertmark, a former News International director, and 10 other defendants, News group alleges he had an undisclosed interest in a company which held 20 per cent of the group's smart card subsidiary, News Datacom.

It is also claimed that others conspired to ensure the group became reliant on one supplier, Mr Arlun Siskind, a director of News Corp and its general counsel, co-ordinates that News group's management "did not have the technical expertise to challenge" a former employee named in the writ, alleged to have taken part in the conspiracy.

Tax avoidance questions have also arisen involving News group's smart card business. Internal company documents seen by the FT show how News Datacom organised its accounts and structure from 1988 to 1992 to minimise the tax payable to authorities in Israel, where its research and development subsidiary operated, and in the UK.

An independent tax expert said it was an example of "extreme tax planning".

News group says it has broken no laws. Israeli tax authorities have "indicated that they do not intend to pursue any claim against News Datacom".

Documents seen by the FT also show how News Datacom executives had some of their remuneration paid as consultancy fees, but booked as directors' fees in the accounts.

Ireland to probe top executives' pay after expenses row

By a Dublin Correspondent

An inquiry has been announced into the pay of top executives of Ireland's state-owned companies following the revelation of alleged irregularities at Bord na Mona, which produces peat for the country's power stations.

The government move follows its admission that Mr Eddie O'Connor, former managing director of Bord na Mona, claimed £314,000 (\$318,850) in expenses over the three years to last March of which £29,000 was paid without receipts.

Under government guidelines Mr O'Connor was entitled to a package worth around £100,000 a year compared with the £150,000 to £200,000 he was paid in each of the last three years.

Mr O'Connor has said all elements of his package were approved by the previous chairman, Mr Brendan Halligan, a former secretary-general of the Irish Labour party. These included flights for his family and payments towards a car for his wife.

Mr O'Connor is credited with turning around the debt-ridden state company, which made profits of £55m on turnover of £1.35m

in 1994, the most recent year for which figures are available. Details of Mr O'Connor's remuneration package came to light following the appointment of a new chairman, Mr Pat Dineen, in September.

He stopped all unreciprocated expense payments and put a stop to the bulk purchase of expensive French wine for "corporate purposes" and the use of a timeshare in Portugal by senior executives.

He also commissioned a report from Price Waterhouse which identified a number of other alleged irregularities including "extra to business" expenses and purchase of suits in lieu of medical insurance.

The directors of the company have called for a second report covering Mr O'Connor's nine years at Bord na Mona.

Mr Ruairi Quinn, minister for finance, has asked all ministers to confirm that the remuneration of the chief executives of the state companies under their control conforms with government guidelines.

Bodies covered by the investigation include utilities such as the Electricity Supply Board and the state gas company Bord Gas.

Cummins and Fiat venture

Continued from Page 1

Cummins customers mainly in Europe.

In addition, Cummins believes it will make a further 100,000 or so engines a year of the new type at its plants in the US for sales in North America and possibly Asia.

The deal seems certain to intensify the competition between Cummins and Perkins of the UK, its main rival in multi-purpose diesels. Perkins also collaborates with several manufacturing groups such as the Ago and Navistar tractor and truck makers.

FT WEATHER GUIDE

Europe today
 The British Isles and most of Spain will have fresh to strong breezes. Low pressure in the Bay of Biscay will bring cloud and rain to western France, the western Iberian peninsula and south-east England. The Benelux and south-eastern France will have showers and some thunder. Western Europe will remain mainly cool. Most of Germany will be cloudy and wet, and the Czech Republic and eastern Poland will have patchy rain. Romania and the Balkan states will have boundary showers, and south-eastern Europe will be sunny, with temperatures of more than 20C in Greece and Turkey.

Five-day forecast
 The Benelux and France will have widespread showers over the next few days, becoming dry and sunny by the weekend. Cloud and rain over Italy and central Europe will move slowly east, and western Russia will remain wet. The UK will become warm and dry, but with some showers in the north.

TODAY'S TEMPERATURES

Madrid	sun	26	Caracas	fair	30	Faro	fair	18	Madrid	fair	14	Rangoon	fair	32
Abu Dhabi	sun	33	Casablanca	showers	15	Frankfurt	showers	18	Malacca	fair	17	Perth	drizzle	5
Accra	sun	35	Cebu	rain	21	Geneva	sun	16	Manila	fair	21	Phnom Penh	rain	28
Algiers	showers	21	Chicago	fair	10	Glasgow	showers	10	Manchester	cloudy	13	Rome	showers	18
Amsterdam	showers	15	Cologne	showers	18	Hamburg	sun	28	Marrakech	showers	10	S. Francisco	sun	24
Athens	fair	22	Dallas	sun	28	Helsinki	rain	13	Wellington	fair	30	Sydney	fair	30
Bangkok	sun	32	Dublin	sun	31	Hong Kong	rain	14	Medford City	fair	23	Singapore	thund	31
B. Aires	sun	27	Delhi	sun	38	Honolulu	sun	28	Miami	fair	30	Stockholm	cloudy	14
Buenos Aires	cloudy	22	Dubai	sun	38	London	rain	10	Moscow	showers	18	Strasbourg	showers	17
Calcutta	sun	35	Dublin	rain	10	Osaka	sun	22	Norwalk	rain	18	Sydney	rain	18
Chengde	sun	35	Dzhenk	showers	18	Paris	sun	13	Moscow	fair	24	Taipei	showers	20
Colombo	sun	31	Edinburgh	showers	8	Perth	sun	18	Munich	rain	20	Tel Aviv	fair	31
Cape Town	drizzle	13	London	sun	24	Prague	sun	16	Nairobi	rain	25	Tokyo	rain	23
			London	sun	24	Warsaw	sun	16	Naples	fair	20	Toronto	fair	13
			London	sun	24	Washington	sun	22	Nassau	fair	20	Vancouver	showers	12
			London	sun	24	Wellington	sun	17	New York	sun	23	Venice	showers	17
			London	sun	24	Winnipeg	sun	15	Nice	sun	25	Vienna	cloudy	21
			London	sun	24	Zurich	sun	18	Nicosia	cloudy	13	Warsaw	cloudy	13
			London	sun	24				Oslo	showers	13	Washington	cloudy	22
			London	sun	24				Paris	showers	17	Wellington	fair	14
			London	sun	24				Perth	fair	18	Winnipeg	fair	12
			London	sun	24				Prague	rain	18	Zurich	cloudy	15

US seeks to bar China, India from fund, Page 6

We wish you a pleasant flight.

Lufthansa

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Handwritten Arabic text: "السنة 1350 هـ"